

AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

FEBRUARY 1, 1944



Rosa Multiflora

SEEDS TREE—SHRUB—PERENNIAL **HERBST BROTHERS**
FLOWER—VEGETABLE 92 Warren St., New York 7, N. Y.

Correspondence with seed collectors and growers invited.

Free catalogue "Seeds for Nurserymen."

See advertisement page 43.

Editorial

KEY TO POSTWAR PLANNING.

Because the war has created an industrial peak activity in this country, accompanied by unprecedented high income and, equally record-breaking savings laid away by the public for the future, economic leaders see the necessity of planning for the postwar era in order that there may not be a pronounced economic reaction. The key to postwar planning is, of course, the taking up of a large part of the possible slack in employment. With a tremendous backlog of landscape work for present clients, and the prospect for a big demand for nursery products for new homes, park and estate renovation and orchard planting, the nurserymen of the United States are in position to play an important part, in proportion to the size of this industry, in putting men to work when peace comes.

The extent of the present industrial activity can be seen when it is realized that the country's income was 140 billion dollars in 1943 as contrasted with 80 billion dollars in the peacetime peak year of 1929. Persons gainfully employed in 1943 totaled 65,000,000 nearly 10,000,000 above any preceding high figure in normal times. In the past two years the cash savings of the people of this country have increased to the tremendous sum of 50 billion dollars.

Prominent in the postwar picture is the necessity of raising from 15 billion to 20 billion dollars annually in federal taxes, and leading economists and businessmen of the country estimate that an annual income of approximately 125 billion dollars will be necessary to enable the people of this country to pay those taxes. High employment is therefore necessary to continue the operation of the federal government, even though its annual expenditures be pruned to the minimum when war is over.

While it is sometimes said that the alternative is inflation, it must be recognized that the current higher prices on all sorts of merchandise have already produced a considerable degree of inflation. A recent assertion in print was to the effect that the 63 billion dollars' worth of retail merchandise sold in 1943 would have been worth only 48 billion dollars in 1935-39; in other words, there was

The Mirror of the Trade

an inflation of approximately one-third. It is predicted that postwar prices will be about forty per cent higher than prewar prices—that a \$60 washing machine will cost \$84 and a \$1,000 automobile will cost \$1,400.

So long as the industrial facilities of this country are engaged primarily in turning out war materials, public savings will pile up and the postponed demand for civilian merchandise will increase. It should be borne in mind that while some war contracts have been curtailed for 1944, they are chiefly in construction, small arms and ammunition, tanks, ships and guns, while 1944 programs for production of trucks, artillery ammunition and aircraft have been greatly increased. It has been reported that in 1943 only thirty per cent of the industrial organization of America was engaged in civilian production and that the increase in 1944 will not be more than ten or fifteen per cent until Germany's defeat.

Home building may be the key to recovery after the war, since estimates range from 500,000 to 1,000,000 homes per year as the postwar construction outlook. Since building is a key industry and one of the largest prewar consumers of material, taking one-sixteenth of all steel and one-tenth of all copper, its influence would be great.

Along with such home building will be a tremendous demand for nursery stock, a fact upon which members of this industry have already laid much stress. To grow the quantities of trees and shrubs that will be required will afford large opportunities for putting men back to work. To perform the landscape operations on these new homes—not to speak

of the deferred planting on the grounds of old clients—will put many more men back to work. Visualizing the activity ahead for nurserymen when peace returns, one can see this industry rendering an important service in the key problem of postwar planning, by offering jobs to many men who then will be seeking employment.

LABOR SITUATION EASIER.

Some relief in the labor situation is foreshadowed by the recent report of the National Industrial Conference Board that a decided slackening in the demands upon the nation's labor resources became increasingly apparent in the closing months of 1943.

Total employment, including all men and women in military service, declined in November for the second successive month, with further reductions indicated for December. The reduction of 1,200,000 in the total number at work or in uniform in November was attributable in the main to the curtailment of farm operations at the close of fall harvesting, but civilian nonagricultural employment also receded by about 160,000 during the month and was below the corresponding total for November, 1942, by almost the same amount.

The board's employment total for November fell to 63,100,000, which compares with the all-time high of 64,400,000 in September.

The full extent of the decline in nonagricultural civilian employment is partially concealed by the rise in November of employment in retail trade, much of which was temporary and part-time in character. The only other substantial offset to the downward trend developed in durable-goods manufacturing, particularly in the war-converted automotive industry.

LATE DELIVERY.

If your copy of the American Nurseryman is slow in reaching you through the mail, please understand that the delay is caused by current conditions which are beyond the responsibility or control of the publisher. Current issues are sent to press on the customary schedule, and mailing is done on the date of publication, or the day preceding when possible. Only when the publication date falls on Saturday or Sunday there may be a day's delay in this schedule, as mailing facilities are not available on those days.

FLORIDA-BOUND the last week in January were W. A. Natorp, of Cincinnati, and Clarence O. Siebenthaler, Dayton, O. Sojourning in the same sunny clime is Lester C. Lovett, Little Silver, N. J.

C. COURTNEY SEABROOK, sales manager of the Koster Co., Inc., Bridgeton, N. J., went to Florida last month for a rest after having been out on account of the flu for about two weeks. He is at Coral Gables and will return early in February.

AMERICAN NURSERYMAN

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What's New in War Control Orders

CATALOGUE PAPER.

In the preceding issue was reported the order of the War Production Board restricting the use of paper in commercial printing in 1944 to seventy-five per cent of the total weight of paper used in 1941. Because of a change in the regulations governing this order, the concluding paragraph of the editor's statement did not correctly apply to firms that issue catalogues.

Schedule II of limitation order L-241, as amended December 31, 1943, makes it impossible for the printer to allocate the paper of one customer to another for the production of catalogues of twelve or more bound pages. Firms which issue such catalogues are themselves responsible for the curtailment of their use of paper in 1944.

Because of the importance of this matter to mail-order firms, the pertinent paragraphs of schedule II are reprinted in full as follows:

(a) Limits on the amount of paper which a person may cause to be consumed in printing certain items.—During the year 1944, and each year after that, no person may cause to be consumed in the printing of items listed in this schedule more than seventy-five per cent, by weight, of the paper which he caused to be consumed in the printing of those items in 1941. It is not necessary for the weight of each copy or edition to be reduced, as long as the total weight of paper consumed in the printing of all copies or editions is reduced by the required amount.

(1) Catalogues (including supplements) of twelve or more bound pages issued by a person who manufactures, distributes or offers for sale the products, commodities or services listed therein.

(b) Certification. No person may order any of the items listed in this schedule to be printed unless he furnishes, or has previously furnished to the printer, a certification in substantially the following form, signed manually or as provided in priorities regulation 7 (§944.27) by an official duly authorized for such purpose:

"The undersigned purchaser certifies, subject to the penalties of section 35 (a) of the United States Criminal Code to the printer and to the War Production Board that he is familiar with schedule II to order L-241 of the War Production Board and that all printing ordered from you of items regulated by that schedule, as amended from time to time, will be in compliance therewith.

"This is a one-time certification and need not accompany each individual order."

Each catalogue firm will need to confer with his printer to determine the most satisfactory way to meet this restriction. If paper for the 1944 catalogue has already been purchased, it may not be possible to re-

duce the weight of the paper base. Reduction of the number of catalogues printed may be a hardship under existing conditions. Reduction of the number of pages may be possible. If more than one catalogue a year was published in 1941, one of them might be omitted or radically reduced in size. Particularly difficult is the situation of those nurserymen who issued small catalogues in 1941 and have ambitious plans for 1944.

LIBERALIZE PAYMENT OF COMMISSION AND BONUS.

Recent announcement of revisions in the policies of the Treasury Department and the War Labor Board lifts many restrictions on commissions and bonuses retroactively to cover 1943 payments.

Hence nurserymen can pay, without approval, any compensation on a percentage basis, provided no change has been made in (1) the percentage rate, or (2) the method of computation, or (3) the employee's base salary since the stabilization date.

If part of the 1943 percentage compensation due was not paid because of the old rules, full payment may now be made without approval.

But if the percentage rate, method of computation for base salary has been changed, the employer must still apply for approval of payment.

The foregoing rules, applying to 1943 as well as 1944 payments, are effective immediately, although formal regulations have not yet been published.

BINDER TWINE.

Conservation order M-84, as amended last October 27, prohibited the use of binder twine except in harvesting crops on mechanical self-tying binders or for use in a self-tying machine. This restricted the use of this commodity in most miscellaneous agricultural industries.

The order has again been amended, however, as of December 6, 1943, and the definition of binder twine is now so written that it will be available to the nursery industry in 1944. "Binder twine means a single yarn twine usually made of agave fiber, but also of Manila, istle, jute, hemp, coir, cotton or paper, and used in connection with the growing, harvesting or delivering of agricultural products."

R. P. White, A. A. N. secretary,

states: "It is our understanding that certain mills have been instructed by the War Food Administration to prepare for the above uses an allotment of twine for 1944, made from eighty-five per cent henequen and fifteen per cent jute. This is not the sisal binder twine formerly used, but is a satisfactory substitute."

WHITE-FRINGED BEETLE.

Effective January 14, regulation 2 of quarantine 72 was revised by the federal bureau of entomology and plant quarantine. This amendment of the white-fringed beetle quarantine regulations has for its only purpose the extension of the regulated areas to include new places where white-fringed beetles have been found in Alabama, Mississippi and North Carolina.

Counties brought within the regulated areas, in part, for the first time are Baldwin and Crenshaw, in Alabama, to include infestations centering in Foley and Luverne; Hancock county, in Mississippi, to include Bay Saint Louis, Waveland and an isolated tract; Simpson county, Miss., to include areas in the vicinity of Mendenhall and Dlo, and parts of the North Carolina counties of Anson, Cumberland and Onslow, because of infestations in the vicinity of Peachland, Hope Mills, Jacksonville and Kellum. A rather general infestation in the vicinity of Collins, Miss., necessitated extension of regulated area in Covington county, and minor additions are made in the Mississippi counties of Forrest, Jefferson Davis and Lamar, and in the Alabama counties of Conecuh, Covington, Monroe and Wilcox.

No change is made in the regulated areas in the three North Carolina counties heretofore under regulation, nor in the areas in Florida or Louisiana.

ROBERT WOMACK, formerly with the Fitzgerald Nursery, Stephenville, Tex., is manager of a new enterprise, Stuart Nursery, Route 3, Gorman, Tex., started by the owners of Stuart ranches near by.

W. C. GRIFFING, Beaumont, Tex., has returned home from the John Sealy hospital, at Galveston. While confined to his home, he has been up a few hours each day and looks forward to returning to the office soon.

Ohio Association Meets at Columbus

Headliner in a full program, E. H. Faulkner, author of the book, "Plowman's Folly," drew an audience of 150 at the first afternoon session of the Ohio Nurserymen's Association, at the Deshler-Wallick hotel, Columbus, in its thirty-seventh annual meeting, January 20 and 21. The farm editor of radio station WTAM, Cleveland, and a former county agent in Ohio, the author spent only a few minutes in presenting his theory that organic plant food should be mixed in the surface of the soil, and not buried deeply as with the moldboard plow. While he was heard attentively by the nurserymen, their questions during the succeeding half hour indicated their differences of opinion, to say the least. He asserted that most of the criticisms of his book had arisen because his statements, referring to the type of soil with which he was familiar, were applied to the many and diverse types of soil to be found in different sections of the country.

Other sessions were proportionately well attended, and everybody turned out for the twelfth annual "Ye Olde Time Dinner" to enjoy an abundance of ham and turkey.

Officers Elected.

Francis Turner, of the Berryhill Nursery Co., Springfield, was elevated to the office of president from that of vice-president. To the latter office was elected Walter Burwell, of the Burwell Nurseries Co., Columbus, and John D. Siebenthaler, Dayton, was reappointed secretary-treasurer.

Walter Truby, of the Tri-State Nurseries, Ironton, and Melvin E. Wyant, Mentor, retiring president, were elected to the executive committee. The holdovers are Paul Kallay, Painesville; T. B. Medlyn, Cincinnati, and Bret Slemmons, Worthington.

Dr. Paul Tilford, of the state experiment station, was elected an associate member, while Dr. J. S. Houser and Dr. L. C. Chadwick were named honorary members.

Opening Business.

At the opening session, the official message of President Wyant was an appeal for more members. Secretary-treasurer Siebenthaler indicated a healthy condition with a balance of \$1,850 in the treasury. Francis Turner, for the membership committee, reported the current total of eighty-one active members.

Walter Burwell reported for the committee on local arrangements, which at the closing session received a vigorous hand for the excellent work performed. The other members were Bret Slemmons and Aubrey DeGraw.

In the absence of Clarence O. Siebenthaler, William A. Natorp reported for the legislative committee, stating that the nurserymen's committee appointed at the summer meeting, to confer with the commissions appointed by the state legislature on postwar highway and park developments, could do nothing because the attorney general had ruled the commissions unconstitutional. The committee had, however, met



Francis Turner.

with the highway director with reference to postwar planting.

John W. Baringer, chief of the division of plant industry, referred to the labor shortage as accountable for the delay of a month in completing nursery inspections last autumn. He reported the expenditure of approximately \$20,000 for treating soil with acid lead arsenate to suppress the advance of the Japanese beetle. The heavy turf-treating program in 1942, comprising 476 acres, showed its effectiveness in that 232 acres only were found necessary to be treated in 1943. The insect has been held in check, and it has been assured that there will be no extension of the federal quarantine in 1944. Dr. J. S. Houser added comments on the control sought by spread of the milky disease and felt encouraged by the progress in two years' time.

Harry R. O'Brien, reporter for the

Country Gentleman, rapidly reviewed the figures that indicated smaller crops of almost all items of food in comparison with the preceding year.

Discuss Outlook.

After the discussion of what kind of plowing is foolish, at the afternoon session, a panel discussion ensued on "What Lies Ahead for the Nurseryman." The definite and helpful information provided by John Leonard, Piqua, O., on machinery, tools and supplies appears in another column in full. Because W. A. Natorp had returned home on account of a severe cold, T. B. Medlyn read the report of his committee on postwar memorial planting. It was published in the American Nurseryman several months ago and has aroused considerable interest since, portions having been reprinted in two prominent garden magazines.

Arthur H. Hill, A. A. N. executive committeeman for the region, offered entertaining comments interspersed with pertinent reminiscences from his experience, winding up with a side-splitting account of one nurseryman's side lines as revealed on his letterhead.

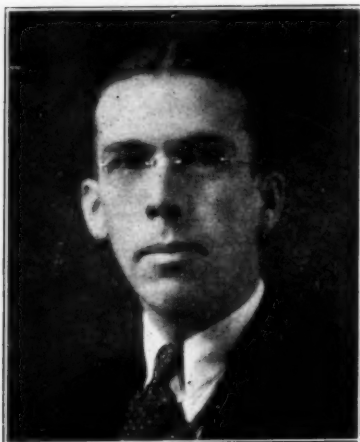
Review of general prospects from an economic point of view was undertaken by F. R. Kilner, publisher of the American Nurseryman, Chicago, and he cited figures to indicate a high level of employment and expenditures in the early years following the close of the war. He expected a heavy demand for nursery stock and recommended making preparations for it. He suggested ways in which individual nurserymen might make their plans along the lines of fiscal, labor and sales preparedness.

Dwarf Fruit Trees.

Opening the morning session January 21, Dr. H. B. Tukey, chief in research at the New York agricultural experiment station, Geneva, spoke on dwarf fruit trees. His outline of the Malling apple rootstocks, their characteristics and uses is presented on a subsequent page, where some of his comments are reported. So much time was taken on this subject that he spoke only briefly on new varieties of fruits, stating that the trend was for diversification, high quality, smaller trees and early varieties. He thought plums were

due for a comeback, aided by the victory garden movement.

In an able and thorough manner, Richard P. White, secretary of the American Association of Nurserymen, spoke on the services performed by the national organization and the value it had rendered to the nurserymen of the country. He stressed the fact that all the benefits resulting have been for the entire industry. The recent rapid growth



G. Walter Burwell.

in membership indicated the widespread value put on the organization.

Report of the association's committee on nursery costs was presented by Dr. L. C. Chadwick. He distributed copies of a 4-page printed form sent out to nurserymen of the state, on which they might indicate their various accounts, either by percentage or in dollars. Tabulation of the forms returned was expected to reveal interesting information, but since only a few had come back, few data were available for report.

Dr. Chadwick later reported on the taxus project at Wooster, where 380 plants of eighty different types have been planted, while an additional forty-five types have been contributed in the form of cuttings.

Substitute Labor.

Detailed information of value came out in the panel discussion on labor, led by Thomas Kyle. Sam Zehring, of the San-Rae Gardens, Dayton, reported on the satisfactory employment of two single Japanese men, employed because the firm could get no other help. He warned that it was necessary to consider the prejudices of a locality and also housing problems.

Francis Turner told how the Berryhill Nursery Co. had employed

Jamaicans, brought in by the War Food Administration and housed in an old CCC camp. They were good workers and wanted to come back, but it is still uncertain whether the government will import such help again this year.

Five Mexicans were employed by Royce Pickett. They were kept separated from the other help. He said that usually the Mexicans worked as a family unit on a piecework or contract basis, being imported by the sugar beet companies for the purpose. This he considered unsatisfactory so far as the nursery was concerned.

High school boys were found good workers by Roger Champion, who spent the summer supervising a group of a dozen or more, of 14 to 17 years of age. They had been brought from Cleveland to spend the summer weeks at a Y.M.C.A. camp. Thirty-eight boys in the camp worked for farmers in the locality, hoeing, picking fruit, etc. They were paid by the nurserymen 40 cents per hour, in addition to 20 cents per day for transportation by bus. He had also employed four Slovenian women, who were found excellent workers.

Harry Malter was asked about the Italian prisoners which had been employed the past year by the Greening Nursery Co., Monroe, Mich. They were about 22 or 23 years old, he said, and worked well. In this case the prisoners had been permitted to do all nursery work, but in New York state he understood the prisoners were permitted only to work on fruits. Howard Fashbaugh added that he had to contract for the prisoners with the authorities at Camp Perry and pay the prevailing rate for such labor, furnishing a truck to transport the prisoners to and from the camp sixty miles away.

In the concluding business session, at which committees reported and officers were elected, Cleveland was suggested as the location for the meeting next summer.

A. A. N. Chapter Meeting.

Ohio A. A. N. members held a chapter meeting at luncheon January 21. Officers of the chapter were named the same as those of the Ohio association. For delegates to the coming national convention were elected Francis Turner, Walter Burwell and Walter Truby, the hold-over delegates being Melvin Wyant and Louis Bookwalter. As alternates were elected Elmer Heitmeyer, T. B. Medlyn, George Siebenthaler, Howard Kyle and C. M. Loose.

MAY CO. POSTWAR PLANS.

At the annual meeting of the Earl E. May Seed Co., Shenandoah, Ia., last month announcement was made that \$115,000 in government bonds purchased by the company in 1943 would be used in a building program after the war. Mr. May announced that the firm would purchase an additional \$100,000 of bonds in the current war loan drive.

Annual business of the Earl E. May Seed Co. was announced as between three and four million dollars with an annual pay roll in excess of \$385,000.

Earl E. May was reelected president of the company; Mrs. Earl E. May, vice-president; Carl Wolford, secretary, and E. S. Welch, treasurer. Directors are E. E. May, E. S. Welch, Gertrude May, H. S. Welch and R. M. Gwynn.

Earl E. May was also reelected president of the Earl E. May Broadcasting Co., with E. S. Welch as vice-president and Raymond Sawyer, secretary-treasurer. Total annual pay roll of this company was in excess of \$100,000.

NEW PLANT PATENTS.

The following plant patents were issued last month, according to Rummler, Rummler & Davis, Chicago patent lawyers:

No. 611. Azalea. L. C. Bobbink, East Rutherford, N. J., assignor to Bobbink & Atkins, East Rutherford, N. J. A variety of indica azalea, characterized particularly by its habit of rapid and vigorous growth; its ability to root unusually well; its early flowering season; its marked freedom from disease, and its large blooms of distinctive blood-red color, which last exceptionally well.

No. 612. Carnation. Russell Engle, Kokomo, Ind., assignor to Tom Kuiper Florist, Kokomo, Ind. A new and useful variety of carnation plant characterized particularly by its strong and active root growth; its extensive development of side growth while in bloom; its disease resistance; its consistently large flowers of heavy substance, pure white color, intense fragrance and strong calyx, which seldom splits, and its exceptionally good keeping quality as a cut flower.



John D. Siebenthaler.

Short Course at Ohio State University

By Lewis Ives

The fifteenth annual short course for nurserymen, landscape gardeners and arborists, including the central regional meeting of the National Shade Tree Conference on the opening day, was held January 17 to 19, at Ohio State University, Columbus, attended by approximately 100 representatives of the field.

Tests on Tree Wound Dressings.

Dr. L. C. Chadwick, associate professor of horticulture, who was in charge of the course, opened the discussions with a progress report on a tree wound healing experiment being carried on at the university. These tests started in 1941 and are being made on English elms. Most other investigators have used artificial wounds. In this experiment, the wounds were made by removing limbs of various sizes. An average of twelve limbs per tree was removed, ranging from two to twelve inches in diameter. The health of the tree, the health of the limb removed, the angle of the limb to the tree and the direction in which the wound faced were noted. Patterns of the wound were traced on graph paper and are being redrawn each year as healing progresses.

In addition to Bordeaux-linseed oil paint and shellac, three wound dressings, manufactured by Tock Bros., New York city; A. M. Leonard & Sons, Piqua, O., and Southport Paint Co., Savannah, Ga., were used. Shellac was used both as a permanent dressing and as a base dressing for the other materials. In addition to the initial painting, the wounds have been redressed once each year.

Tests were also run to find out whether there would be a difference in healing if the dressing was put on immediately after the wound was made, or delayed five days after the limb was removed.

The first records were taken in the fall of 1942. At that time there was some increase in area of a number of the wounds. In the fall of 1943, records showed no further increases. Several small wounds were completely healed. So far, the rate of healing does not seem to be affected by health of the tree or of the limb that was severed. Similarly, it is not affected by the direction it faces or by the angle of the branch to the tree, and not by the size of the wound or its location, whether basal or farther up into the

tree. Also, there was no difference as to whether the wound was treated immediately or five days after wounding.

The shape of the wound is the most important factor governing the rate of healing. It was evident that wide wounds are healing much slower than oval or narrow wounds. The efficiency of the individual wound dressings varied with the size of wound. Large wounds seem to be healing best when treated with the paints, with shellac and Bordeaux following in that order. On medium-size wounds little difference was detected between the three com-



L. C. Chadwick.

mercial dressings. On small wounds, Tock and Leonard paints showed best results, with shellac and Savatree being nearly as good.

Outsider's View of Tree Surgery.

Karl Dressel, professor of forestry at Michigan State University, East Lansing, talked on "An Outsider Looks In on the Tree Surgeon."

An outsider wonders about the work of the tree surgeon. He wonders why he has not been told more about the care of his shade trees. There should really be more of this teaching done. It has been done in a few instances by national advertising, but most of it needs to be done by the local firm. He brought out the fact that people are being fooled every day by quacks who profess to be able to cure tree ills. He suggested these methods of public education for local men to follow:

(1) Talk good tree care on every

possible occasion. Talk to women's clubs, garden clubs, etc. If really interested, make a set of color slides of work being done in your own city. This local atmosphere will stimulate interest.

(2) If possible, put a display in some empty store window downtown.

(3) Prepare some interesting newspaper articles. Point out interesting trees and shrubs in the community. Not many people know much about tree identification.

(4) Join the Rotary Club, Kiwanis Club, church, anything to get yourself well known in your district. However, don't overdo it.

Grade Changes.

A. Robert Thompson, of the National Park Service, United States Department of Interior, talked on the "Treatment of Trees Affected by Grade Changes." He stated that beech, linden and oaks are among the trees most susceptible to grade changes. Poplar and willows are not injured so easily. Symptoms of injury are weak growth, small, pale leaves and much suckering.

To aid trees suffering from damage done by fills, remove as much soil as possible from under the tree. Provide drainage and aeration by tiling. After the roots have had time to recover, fertilize the tree to give added strength. If it is possible, replace young trees with long-lived species.

In making fills around trees, it is best to obtain, as nearly as possible, normal conditions. Steps recommended were: (1) Remove all debris from around tree. (2) Cultivate the root area with as little disturbance to the roots as possible. (3) Fertilize. Use an inorganic fertilizer so that it becomes available to the tree almost immediately. (4) Beginning at the trunk, lay tile lines radiating out from the tree like spokes of a wheel. In very wet soils, extra lines should be used. (5) Bridge over these tiles with stones to prevent breaking by heavy machinery. (6) Top lap the tile joints to keep soil from washing down into them. (7) Lay the well around trunk. (8) The tile lines should run out from the base of the well and the ends should be covered with wire mesh to keep out rodents. (9) Crushed rock should be placed over the whole area. Cinders are not advis-

able, unless it is absolutely sure they contain no toxic materials. This tile system, with crushed rock over it, gives good aeration and moisture control and is a possible irrigation system in extremely dry weather. Modification of this system may be necessary because of expense involved or value of the trees. Mr. Thompson does not recommend expensive protection of trees subject to major diseases. (10) Install risers at the end of the radiating tile.

If the grade is being lowered: (1) Avoid any unnecessary cutting of roots. (2) A retaining wall should be built around the base of the tree. (3) The root area should be mulched to conserve moisture. (4) Prune the tree as much as possible, using good judgment. The tree may benefit from bracing. (5) Don't do any extensive cavity work until the tree has recovered from the effects of the change in grade.

Phloem Necrosis.

Roger U. Swingle, of the United States Department of Agriculture, who is connected with the division of forest pathology at Columbus, spoke on the status of the phloem necrosis disease. In 1941, the disease was found at Jackson, Miss. Observation showed that its spread to that locality was of recent origin, and it is of considerable interest in that it indicates a possibility that the carrier of the disease is a southern species of insect. The carrier of the disease has never been identified, but it is supposedly a sucking insect of some kind. Observations on spread of the disease in the past ten years support this theory, since the northern limit of occurrence of many southern species of insects is central Ohio, the northern limit of the phloem necrosis disease at this time. In the past five years there has been little spread northward, possibly because of this insect limit. If this disease is carried by a southern species, there is a possibility that the disease will not spread farther north.

Since 1940 there have been attempts to find some chemical which might control phloem necrosis when injected into the tree. So far, none has worked.

The research efforts now are being concentrated on disease-resistant trees. There are many seemingly disease-resistant trees in areas ravaged by the disease. Seedlings from these trees are being propagated and grown. These are being inoculated with the disease, and if any prove immune to phloem necrosis, they will in turn be inoculated with Dutch elm disease, to try to reach the ulti-

mate goal of trees resistant to both diseases.

Dr. Swingle advises nurserymen to see to it that when dead trees are removed in their community, there is something done about replacement with other species.

Effect of Nutrition.

Dr. Paul E. Tilford, of the department of botany at the Ohio agricultural experiment station, Wooster, talked on the "Effect of Nutrition on Plant Diseases."

Plants need, for the manufacture of foods, carbon, hydrogen and oxygen. These compounds are combined in photosynthesis to make sugars, which are used with soil nutrients in plant growth. Ninety per cent of a plant is water, which it gets from the soil. A small per cent of this is used in photosynthesis. Carbon and oxygen are obtained from carbon dioxide and oxygen in the air.

Nitrogen in the form of nitrates gives strong, vigorous vegetative growth. It also takes part in reproduction and is one of the components of the protoplasm of a plant cell. It is a highly soluble element and is often lacking because it is readily leached from the soil.

Phosphorus is used in cell division and is one of the constituents of the cell wall and of protein found in the plants. It stimulates root production and growth. It also has a part in making stiff stems.

Potassium acts as a catalyst in carbohydrate and protein manufacture and aids in the translocation of foods from one part of the plant to another. Potassium seems to balance the effect of nitrogen. It seems to give more resistance to adverse conditions. The tissues of the plants are made harder and more resistant to disease. It influences root growth and water intake and acts to intensify flower colors.

Calcium improves soil structure. It encourages the action of bacteria. It neutralizes toxic materials and aids in stiffening stems. Iron is used in chlorophyll formation. There are also small amounts of other elements used in plant growth.

If the essential plant growth elements are absent, poor growth results and resistance to disease is lowered. Excessive amounts also cause trouble. He pointed out that too much nitrogen produces excessive growth on pear trees and lowers their resistance to fire blight. High nitrogen on roses gives vigorous growth, abundant flowers and less black spot. High applications of phosphates seem to make plants more

resistant to root rots. *Fusarium* wilt of cotton in Arkansas was checked with ample potassium.

"Information. Please."

An "Information Please" session, in which questions on insect and disease control were answered by J. S. Houser, of the department of entomology at the Ohio station at Wooster; Forrest C. Strong, of the department of botany at Michigan State College, and Dr. Paul E. Tilford, was a feature of the program. The questions and answers brought out the following recommendations:

The dying of paper birches in Ohio is caused by the bronze birch borer, which works in the tops of trees. There seems to be no way to control this pest except to arrest the spread for a while by cutting out the tops of the trees below where the borer is working.

Redbud blight seems to be caused by two things—canker and verticillium wilt. Redbuds are susceptible to verticillium, and after they are once infected, there is no control. Canker is a fungous disease that grows through the bark on twigs, leaving a long depressed area. The leaves yellow, and soon the branch dies back, even into older branches. It is well to cut out the deadwood well below the diseased parts and give the plants a good application of fertilizer.

Redbud likes an alkaline soil; therefore it is probably more resistant to disease if grown in alkaline soil.

Fermate with a sticker was suggested as a preventive of cedar-apple rust. Bordeaux 180 and Elgetol were other materials recommended for control. Also, better education on the resistance of different varieties of junipers and malus to the trouble is needed. Some apples do not get the cedar-apple rust, but it is advisable to keep cedars and apples from one-quarter to one mile apart to help control the rust.

The danger of arsenic in the ground poisoning vegetables is much discussed. It seems that there is little lead or arsenic in analysis of the plants, but until it is definitely proved, it is advisable to be cautious.

Taxus mealy bugs can be controlled fairly well by a summer spray of Black Leaf 40 with Grasselli spreader. Some work must be done on dormant sprays before a good winter spray is found.

Postwar Landscape Problems.

J. P. Porter, professor of ornamental horticulture at Cornell University [Continued on page 45.]

Large Attendance at Rochester

By K. D. Brase

Members of the New York State Nurserymen's Association—Western Branch rewarded the energy and perseverance of the officers of their organization under the leadership of President Howard Maloney, of Dansville, with an unusually large attendance at the annual meeting, held January 14, at the Hotel Rochester, Rochester. And they, in turn, were rewarded by the fine program provided for them.

The president in his opening address reported briefly on some of the accomplishments of the year, namely, the formation of a single state-wide nurserymen's organization, the active request for an increased state appropriation for research at the Geneva experiment station on problems of rootstock production, nursery storage and nursery insect and disease control, and a petition for representation of the nursery industry on the agricultural conference board. He thanked the membership, officers and committees for the support given him during the year and urged that all give the same support to the new state-wide organization, which was to hold its first meeting January 27 at the Hotel Pennsylvania, New York city.

Dr. H. B. Tukey, Geneva, who has acted as assistant secretary and treasurer during the illness of the secretary-treasurer, Charles Maloy, and who has been elected secretary-treasurer of the new state-wide association, then presented the financial report and explained in detail the organization of the new association, made up of the New York Nurserymen's Association—Western Branch, the Allied Nurserymen's Association and the Long Island Nurserymen's Association. It was pointed out that the general welfare of the industry is left to the state organization, but that each separate group has complete autonomy in local matters.

The first speaker on the formal program was Mark Buckman, president of the New York State Horticultural Society and superintendent of the Sodas Fruit Farm, largest farm in New York state devoted exclusively to fruit growing. He spoke on the common interests of nurserymen and fruit growers. He gave examples and urged close cooperation between nurserymen and orchardists. Thus Patrick Barry, prominent Rochester nurseryman, during the latter part of the past century started

the permanent fund for the New York State Horticultural Society, representing the fruit growers of the state. "The fruit grower," he said, "is dependent on the nurseryman because the strains and varieties he produces are the foundation of the future orchard. The nursery industry, therefore, must be sensitive to the problems of the fruit grower and always be willing and ready to produce stock which will be helpful to the fruit industry of today."

Chester C. DuMond, state commissioner of agriculture, describing in frank words the activities and troubles of the various agricultural branches, pointed out that any regu-



Howard W. Maloney.

latory measures coming from his office are for the protection of agriculture. He expressed the hope that his judgment would always be founded on real facts. If new regulations are necessary, they are not issued to persecute anybody, but they are to protect the honest nurseryman. Through his wide experience in fruit growing as well as in the nursery business, he gave some sound advice and created confidence in his listeners. Success in fruit growing, he said, depends in great part on the nursery stock purchased. Therefore the nursery business must be strictly reliable, must have varieties which are true to name and must merit the confidence of the fruit grower. Referring to the future, he pointed out that we are confronted with unknown conditions. Although the orchardist has made a profit this year, what the next

year will bring is still a question. The nursery business depends on the well being of the fruit grower. Discussing necessary research work affecting the nursery industry, he stated that he wanted to and would strongly support research and that he particularly is interested in having the research needs of the nursery industry known.

Before the morning session was ended, President Maloney introduced Howard Taylor, from the Allied group, who is now serving as president of the state association. Mr. Taylor made a few remarks on the meeting to be held at the Hotel Pennsylvania, January 27, and urged that all who possibly could should attend.

Dr. A. M. S. Pridham, of Cornell University, briefly mentioned changes of personnel at Cornell due to the war and expressed his hope that in the future meetings could again be held on the campus.

The morning session ended with reports from the various committees and election of officers for the year 1944. Richard L. Holmes, Newark, was elected president. Vice-presidents are John Kelly, Dansville; Ray Rice, Geneva; Ed Lehde, Ebenezer; E. C. Bushnell, Syracuse, and H. B. Tukey, Geneva. The new executive committee consists of Howard Maloney, chairman; Les Engelson, Newark; D. C. Brown, Rochester, and the officers. Al Syneseal, Newark, was elected secretary-treasurer.

The morning session was followed by a luncheon, at which Dr. William Myers, dean of the New York state college of agriculture; Dr. C. E. F. Guterman, director of the Cornell experiment station; Dr. A. J. Heinicke, director of the Geneva experiment station, and the new officers were introduced by the president.

The afternoon session opened with a talk by Dr. A. B. Buchholz, of the bureau of plant industry, department of agriculture, Albany. He reported that no extension of the Japanese beetle quarantine was planned, since the situation was found to be well in hand. Several areas in which beetles were found last season have been treated with arsenate of lead, and an expanded program to continue biological control work of the beetle through distribution of special preparations containing the milky disease has been planned. Commenting on other dis-

eases and pests, he pointed out that the Dutch elm disease is not so potent as first believed. Although extension of the quarantine for this disease has been necessary, the disease does not spread so rapidly if the elm leaf beetle, the spreader of the disease, can be controlled. Other pests to which special attention has been given are the golden potato nematode and other nematodes, on Long Island; the snout beetle, around Oswego, with special inspection of plants shipped from that area; the Oriental fruit moth, and the European chafer, in western New York. The last-named pest, it is believed, does not warrant stringent action. In regard to virus diseases of stone fruits and raspberries, Dr. Buchholz urged strongly that nurserymen for their own protection carry out the following suggestions: (1) Furnish with all stone fruits sold a certificate of origin and do not sell any stone fruit stock grown outside of one's own; (2) do not plant peaches and prune stocks in the vicinity of chokecherries; (3) sell only certified stock of raspberries. Through the cooperation of the nursery inspectors, sources of certified plants can be obtained by anyone.

Dr. William Myers, dean of the college of agriculture, Cornell University, gave a clear analysis of the price structure and how it affects agriculture. Mistakes made, he said, cannot be charged to farm production. Unwise price policies, divided authority and final decisions made by men not familiar with production are entirely responsible. Explaining what has happened to prices and the income of the farmer, he mentioned the parity relationship. The major part in the increase in farm prices has been recovery and restoration of balance between price and cost. Thus in 1943, New York farm prices were favorable in comparison with farm cost, except farm labor. In 1942, for the first time since 1920, the average net income per worker in agriculture was in a reasonably favorable relation to the average annual income of the industrial worker. Basic commodity prices have followed the general trend of World War I. Prices of farm products have about kept pace with the corresponding period of World War I in spite of price ceilings and other regulations. The per capita income of farm people has increased more than three times and of the nonfarming population about two and one-half times. This at first sounds as if the farmer's present income is high, but we must consider from where income started.

Even with an increase of three times per capita, the real income is still below that of the nonfarming population.

As to the outlook in 1944 Dr. Myers believed that the labor problem, farm supplies and machinery replacements would be no better than in 1943. And one must consider that we are near the peak of net income. If 1944 will bring a big apple crop, no doubt good prices will be obtained. Ceiling prices seem to work better with big crops. Continued good prices for apples will affect the nursery industry in particular. In conclusion Dean Myers



H. B. Tukey.

recommended the following: Produce the maximum of essential food, and develop and maintain an efficient business. Use necessary credit for intensive operation, but keep debts at the lowest point that permits efficiency. Get your finances in shape by reducing excessive debts to a safe basis. Avoid speculation, because possible profit from speculative purchase of additional farm land in periods of favorable prices and incomes is seldom worth the worry and risk of losing all if a severe depression should follow. Build your financial reserve and help win the war by investing in war bonds. The most effective way of avoiding the disastrous results of inflation and deflation is through using increased income to reduce debts and to build a financial reserve in war bonds.

R. P. White, executive secretary of the A. A. N., presented basic facts of information for adjustment in the postwar period. He pointed out that the trade organizations such as the A. A. N. are giving only the

background—the individual member must do the rest. It is the responsibility of each nurseryman after this war is ended to put men to work. Surveys conducted in his office give all indications of a good future for the nursery industry. Tremendous demands for consumer goods, large available purchasing power and high productive facilities after the war has ended, all point to good business conditions. Furthermore, relaxation of rules and regulations and conversion (already twenty per cent of total capacity) to peacetime production are encouraging. Development of great highway systems will increase the demand for native plant materials. Housing programs, public and private, will be of benefit to the nursery industry. Park systems and changes in the building code in large cities, particularly in elimination of so-called blighted areas and conversion of such areas to parkways, will bring about a demand for nursery stock. And finally, master plans now developed by insurance companies for housing projects in cities and urban areas call for landscaping and fruit gardens for the individual projects. He finally reminded the listeners that in 1943 most nurserymen had only liquidated inventory. He advocated a sound planting expansion and well balanced production which can be handled by one's own organization, but warned not to overplant and not to repeat the mistakes following World War I.

NEW WACHENDORFF FIRM.

Mrs. Edward A. Wachendorff, J. G. Barrow and J. H. Landers announce the incorporation of Wachendorff Bros., Inc., to take over and operate the florists' and nursery business formerly owned and operated by the late Edward A. Wachendorff under the name of Wachendorff Bros., Atlanta, Ga. Mr. Landers, who is president, and Mr. Barrow, who is secretary and treasurer of Wachendorff Bros., Inc., have both been with the firm for many years and will carry out the same policies established by the original proprietor.

J. A. MADDOX, former secretary of the Oklahoma Nurserymen's Association, is now employed as general manager of the Midwest City Nursery Co., at Midwest City, ten miles east of Oklahoma City. This town, near the airport and Douglas factory, was founded by W. P. Atkinson, who established the nursery to meet the need for landscaping.

Tool Supply This Year

The situation on nursery and garden tools is now much more definite than a year ago, definitely more difficult. The following hand tools have not been manufactured for over a year and one-half and so far there is no prospect for this year:

Trowels of all kinds,
Lawn edgers,
Small hand cultivators,
Steel lawn rakes,
Flower snips (small shears),
Grass and hedge shears,
Metal plant stakes, labels and supports,
Brass hose fittings (and nozzles),
Watering pots (sprinkling cans),
Steel lawn rollers (and cultivators),
Lawn mowers, both hand and power (grass catchers).

At this time you should go over your stock of these items and put them into the best possible shape for next season, and then lock them up.

Only tools considered essential for the production of food are now being produced and only in a very limited number of patterns. Last year the factories were permitted to some extent to finish up steel and parts in process, but now there will be:

Just one nursery spade, about seven pounds, with full length straps;
One garden spade with square blade in a cheap grade;
Round and square-point shovels in several grades (no molybdenum);
A 6½-inch garden or field hoe and 7-inch nursery or beet hoe;
Light and medium-weight spading forks with flat tines;
The Speedy cultivator and 5-prong Norcross cultivator;
14-tooth level head rake (the quota has just been cut on these).

Furthermore, factory quotas are set at 100 per cent for the year ending July 1, 1942. The victory gardeners, who produced forty to fifty per cent of the green truck crops last year, are buying these tools right now, almost as fast as the dealer can put them in stock. And there is a critical shortage of handles; almost any kind of wood is being used.

On horticultural cutlery, which includes knives and pruning shears, the situation has recently become serious. However, we shall have some Wiss and H. K. Porter shears again this year. All of the brass and nickel silver were actually taken away from the knife factories, so that the new knives will have steel linings and rivets.

In propagating supplies there will

Presented at meeting of Ohio Nurserymen's Association, January 20, by John Leonard, of A. M. Leonard & Sons, Piqua, O.

be no medicated grafting tape, but there are still raffia, grafting thread and rubber budding and grafting strips. Last year Goodrich made up a limited amount of rubber budding strips of crude rubber and for next season there will be synthetic rubber budding strips, now being tested.

On pruning saws and tree trimmers the situation is not so bad, though about half of the saw patterns have been eliminated. Bracing materials for tree surgery work, such as tree rod, lag hooks and cable, can be had in limited quantities under present regulations.

Lawn sprinklers of the large oscillating type require a certification "for use in agriculture."

The production of hand sprayers and dusters is supposedly limited to seventy per cent as compared with a demand for five to ten times as many. Power sprayers can be built to the extent of sixty-three per cent, but last year the factories took on war contracts, which must come first. But you can obtain necessary parts without trouble.

Steel tray barrows are restricted to foundry use. Just recently rubber tires were released, both for wood barrows and replacement purposes. As wheeled evergreen carriers and hand

trucks come under this classification, they should be obtainable again soon, one of the greatest labor-saving devices in the nursery.

Sisal and jute twines are no longer spun, these imported fibers being reserved for rope. And to obtain the substitute istle and rove twines it is necessary to file form PD-1A with your nearest WPB office, and you should do this at once if you will need twine for your spring operations. Hemp is now being grown in Central America and we are promised a better rope than jute for next year. Many growers are using balling or pinning nails instead of twine, of which a sufficient supply is in sight. Dr. White has been keeping the members of the A. A. N. posted on wood boxes and containers.

As a farmer or landscape firm you can originate a AA-5 priority rating, but distributors get a AA-3 rating from Washington on their full quota. In fact, on practically everything the distributor is given a quota by the factory and that is the limit.

In closing, I urge that you nurserymen stick to your regular source of supply, not asking for more than your actual current needs (please be reasonable) and this source should take care of your requirements to the extent of past years, or at least you will get your share.

Malling Rootstocks

The so-called Malling apple rootstocks, bearing the name of the experiment station in England, were not originated there, but are selections made in an attempt to sort out the strains which had been mixed in long cultivation in Europe. Not all of them are dwarfing in their effect; some of them produce full standard-size trees.

In this country they have been grown for a dozen years or more at the New York agricultural experiment station, at Geneva. Dr. H. B. Tukey, director of research there, presented the list and comments reproduced below, in connection with his talk before the Ohio Nurserymen's Association, January 21.

These rootstocks have been propagated by mound layering at the Geneva station. Their congeniality and compatibility have been proved by budding on them thirty-six varieties of apples in 210 combinations. A few commercial nurserymen have been propagating these rootstocks, particularly the dwarfing kinds, but

the supply is not large and at the present time there are no wholesale quantities offered. The dwarf apples on Malling IX appear in some retail catalogues, but the supply is insignificant compared with the great demand fostered by the victory garden movement.

Most dwarfing is Malling IX, which produces a tree about shoulder high, suitable for the garden. The roots are brittle and the tree is easily uprooted unless it is headed low, down to about eighteen inches above the ground, to produce almost a shrub form.

Malling III produces a semidwarf tree, about the size of a peach tree, and has been found to do especially well with McIntosh and Northern Spy. Malling II is a little taller than Malling I and difficult to propagate. IV is uniform in the propagation bed, but the tree is poorly anchored. V propagates better than II. XIII is larger than I and produces trees that do well on wet soil.

Roots of hairy type are character-

istic of the recommended varieties, but state nursery inspectors have been informed now that this is not indicative of disease or pests in the case of these rootstocks.

For pear trees the dwarfing stock is, of course, a strain of quince, of which there are several. There are no dwarfing stocks for peach or cherry trees, but *Prunus besseyi* has been suggested for plums.

In the list below the number of asterisks before the number of the rootstock indicates the degree to which it is recommended by Dr. Tukey.

MALLING APPLE ROOTSTOCKS.

- *** I—Broad-leaved English Paradise (of Rivers). Originated by Thomas Rivers about 1860. Vigorous and tall growing in stool beds. Semidwarf.
- * II—Doucín. Also called English Paradise. An old stock, at least two centuries old. Does not root easily. Semidwarf.
- III—Unnamed, first thought to be Dutch Doucín, a common stock widely distributed in Europe. Suckers badly. Semidwarf.
- *IV—Holstein Doucín. Also called Dutch Doucín, common in Holland and Germany. Roots easily. Semidwarf.
- V—Doucín Améliors. Also called Improved Doucín in England and Red Paradise in Holland and Germany. Roots easily. Semidwarf.
- VI—Nonsuch Paradise (of Rivers). Originated about 1860. Roots easily. Suckers. Trees lean. Semidwarf.
- *VII—Unnamed. Long known in English nurseries, little used. Roots easily. Dwarf to semidwarf.
- VIII—French Paradise. Common on the continent. Weak grower, shy rooting. Very dwarfing.
- ***IX—Jaune de Metz (of Dieudonné). Also called Yellow Metz and French Paradise. Originated about 1879. Propagates well. Very dwarfing.
- X—Unnamed. Doucín U. 1 from Spaeth Nurseries, Berlin. Semidwarf.
- XI—Unnamed. Selection from crab stock in England. Semidwarf to semistandard.
- *XII—Unnamed. Selected from crab stock in England. Does not propagate readily. Standard.
- *XIII—Unnamed. Doucín U. 2 of Spaeth Nurseries, Berlin. Roots readily. Semidwarf to semistandard.
- XIV—Unnamed. Doucín U. 5 of Spaeth Nurseries, Berlin.
- XV—Unnamed. Doucín U. 6 of Spaeth Nurseries, Berlin.
- **XVI—Unnamed. Doucín U. 3 of Spaeth Nurseries, Berlin. Also called Ketziner Ideal. Roots fairly well. Standard to semistandard.

IN COUNTRY'S SERVICE.

ATLEE CONNER, of Conner Bros. Nursery, Charleston, W. Va., is now in the navy.

ALVAR ANDERSEN, of Alvar's Nursery, Northbrook, Ill., is now overseas, having been in service for six months.

RALPH LYCAN, youngest son of H. W. Lycan, owner of the Home Nursery Co., Fort Gay, W. Va., is a seaman first class in the coast guards. He was in Africa and Sicily, but last month wrote from India.

CORP. WILLIAM SMITH, son of the secretary of the Sherman Nursery Co., Charles City, Ia., is now a weather observer at Gardner air field at Taft, Cal.

PAT FOSTER, 25-year-old son of Jess Foster, now with the Holton & Hunkel Co., Milwaukee, Wis., sailed for the south Pacific theater of war at Christmas time.

ROBERT LAW, 18-year-old son of K. B. Law, of the Jewell Nurseries, Inc., Lake City, Minn., is now in the railway transportation school at Claiborne, La.

AMERICAN NURSERYMAN

WADE KUMLIEN, 19-year-old son of L. L. Kumlien, Dundee, Ill., is training in the army air corps at Jonesboro, Ark., after his initial period at Miami Beach, Fla.

REPORTED last month to be in England, Walter W. Hillenmeyer, Lexington, Ky., now has the rank of captain.

JACK SIEBENTHALER, 19-year-old son of John Siebenthaler, Dayton, O., is in V-12 training for marines, now a sophomore at Cornell University.

THE business of Wade & Gatton, Belleville, O., is being run by the mother of the four Wade boys, who are all in service. Pvt. Cy A. Wade is with the headquarters company of the 63rd engineering battalion, at Fort Lewis, Wash. Robert L. Wade is engaged in radio maintenance at the naval air base at Clinton, Okla. E. Wade Burr is at the naval training station at Great Lakes, Ill. Lieut. Richard G. Wade is in the 63rd squadron at the army air base at Wilmington, Del. Jack D. Gatton is with a mobile training unit at McDill field, Tampa, Fla.

SAVE CONTAINERS

USE THEM AGAIN

MEN, MACHINES AND MATERIALS *once used to make food containers are now doing war work....*



5 BUSHEL BASKETS CONTAIN ENOUGH LUMBER TO BOX 1500 ROUNDS MACHINE GUN AMMUNITION



60 WIRE-BOUND BOXES CONTAIN ENOUGH METAL TO CRATE A JEEP



RE-USE WOODEN CONTAINERS

Michigan Meeting Sets Record

By Harold E. Hunziker

For several years past, members of the Michigan Association of Nurserymen had thought that they would never see a Michigan meeting to surpass the one of that particular year. However, the meeting at the Hotel Fort Shelby, Detroit, January 27 and 28, did surpass previous records for attendance and possibly excellence in program and entertainment. There were between 125 and 150 present at one time or another at the meeting. One hundred and seven sat down to the dinner and entertainment on Wednesday evening.

The program started with a few opening remarks by President Charles B. Greening, Monroe. He then introduced Mr. Myers, of the Detroit park commission, who represented Mayor Edward Jefferies, Jr., and gave the address of welcome. In the address he spoke of the 4,500 acres of parks, playgrounds and boulevards in the city of Detroit, with an estimated value of \$85,000,000. Of considerable interest was an outline of postwar development for parks and playgrounds. In the program is \$2,000,000 set aside for purchase of shade trees and other plant material; \$4,500,000 is budgeted for work on conserving and reclaiming present plantings and shade trees.

In the secretary and treasurer's report, Andrew M. Grootendorst showed that there were eighty-six paid active members and twenty-four associate members, with a "war casualty" list of twelve active members, who were either in the armed services or working at war jobs. The finances of the association were in excellent shape, with a cash balance at the beginning of the convention of \$833.36 and with war bonds valued at \$530.90, giving a total balance of \$1,364.26.

Inspection Service.

After a telephone call from Commissioner Figy, who could not appear until after lunch, President Greening called upon Cy Boyer, director of orchard and nursery inspection. In summarizing the activities of his office, he stressed the importance of contacting representatives and senators to encourage the passage of the pending bill, vetoed by the President, on making federal agencies meet state inspection regulations. He told of the pioneering work of Michigan on budwood certification and also of the city of Detroit's ordinances protecting nursery

stock coming into the city. Double the number of Christmas trees were inspected this year, and a great surplus of trees appeared at the holiday. The Japanese beetle spread did not appear too alarming, though Mr. Boyer reported finding beetles around airports. The director said more policing would have to be carried on during wartime. He noted that some 100,000 plants were condemned at Detroit, alone, last year. Mr. Boyer said his department was being on guard for new insects and diseases which might be spread through war transportation from every port of the globe.

Mrs. Ruth Moser Place, garden editor of the Detroit Free Press, told

northern states, with New Jersey being the foremost producing state at the present time. At present 1,200 acres are under cultivation, and about 500 acres in Michigan, with additional developed plants to plant another 500 acres. It takes eight years to bring the plants into maximum production, but they are capable of living 100 years. It is best to grow blueberries in places free from frost pockets in open areas, if possible.

The propagation is difficult, with the plants needing almost daily attention. Mr. Johnston thinks there is a big future for the berry commercially. The whole story is told in his booklet issued by Michigan State College, which he suggested members might obtain from the college or at the experiment station at South Haven.

Talk on Tunisian Campaign.

In the afternoon Captain N. E. Hood, of the American air forces in Africa, told of many experiences in the war after leaving his home in Wisconsin, until he was wounded while on duty in Africa. He told many experiences that brought out the true hero in colored, Jewish, Protestant and Catholic men, all giving their utmost to bring about right in the world.

Captain Hood told the members that the boys over there could take it, if only we here at home would back them up. He warned of the long, hard battles to come and of the broken men we would have to readjust in our home environment after they had temporarily lost their feelings for mankind.

Commissioner Figy Speaks.

Michigan nurserymen were agreeably addressed by Charles Figy, commissioner of agriculture, who said his department was a regulatory department. He proposed to treat every man alike and to play politics with no one. He sketched the activities of his office and its wide scope. On the subject of advertising, Commissioner Figy said Michigan products must be kept before the people, asserting that the reason people believed Idaho potatoes were better than Michigan's was the advertising telling them so.

With reference to the nursery and orchard inspection division, he said the nurserymen come closer to paying their costs of running the division than any other branch of his



Clifford Emlong.

of the coming national victory garden spring conference, at Detroit, February 23 and 24.

Blueberry Culture.

"Blueberry Culture in Michigan" was the subject of a most interesting illustrated talk by Stanley Johnston, superintendent of the South Haven experiment station. Historically the blueberry was most highly prized as a native fruit. For 300 years the Americans did little to develop it under cultivated conditions. Blueberries require an acid soil, doing best with a pH of around 4.5, but can be grown with as high a pH as 5.0 or as low as 2.5. The acidity of soil is absolutely essential to their growth. Water content in the soil is also an important factor. They thrive from North Carolina to the

department. Before leaving, the commissioner made it a point to visit with as many Michigan nurserymen as possible.

A. H. Hill in Good Form.

Of many talks by Arthur H. Hill, member of the executive committee of the A. A. N., the one given at Detroit was his best, in the opinion of those who had heard him frequently. Mr. Hill was in a jovial mood in discussing whether we actually made a little money or were gradually losing our nurseries. His talk appears in full on a following page.

In a humorous vein, he read Charlie Chestnut's list of diversified services and products composing a nurseryman's side lines, from A for air-conditioning to Z for zealous service.

Election of Officers.

The nominating committee, composed of Arthur L. Watson, N. I. W. Kriek and Henry Weller, proposed the following, who were unanimously elected: President, Walter M. Coon, Farmington; vice-president, Clifford Emlong, Stevensville; secretary-treasurer, Harold E. Hunziker, Niles. Elected to the executive committee for two years were Robert Ackerman, Jr., Bridgman, and Irvin Cedergreen, Detroit, and for one year Richard Krieger, Bridgman.

Dinner Meeting.

At the dinner meeting, W. W. Edgar, sports editor, Detroit Free Press, told of his experience with gardening after moving from an apartment in the Fort Shelby to a 2-acre home site, six years ago. In the first six months he was a prize-winner at a county fair. In attempting to connect the nursery business with sports, he reminded the nurserymen of golf courses, race tracks and even ball parks beautifully landscaped. He drew attention also to the Lansing bowling alley, that was beautifully landscaped. To the club members, these beautiful surroundings bring pride in membership.

Postwar Parks.

Arthur C. Scheffle, executive secretary, Huron Clinton Metropolitan Authority, spoke Friday morning about park plans for the five counties surrounding Detroit. These counties contain one-half the population of Michigan. To give some idea of what Detroit was visualizing, he showed motion pictures of Westchester county, N. Y., and the work done by Robert Moses. In the program there is money for acquiring land,

which is being done at this time. Plans are being blue printed and surveys made. The program is to include many parkways, four or five intensive parks, cleaning up of river ways, and outlying parks within fifty miles of Detroit. They have 2,000 acres for these purposes now.

Labor Problem.

C. B. Dibble, of the Michigan State College extension service, spoke on the emergency farm labor program. He urged nurserymen to clear their needs through the county agents. He thought it well to anticipate needs and get requests to county agents at once. He told of the work of the women's land army and the victory



Harold E. Hunziker.

farm volunteers. Mr. Dibble said some assistance might be given in foreman training and vocational agricultural training.

A. A. N. President Speaks.

Frank S. LaBar, president of the American Association of Nurserymen, commented on the growing importance of the Washington office and how well the A. A. N. ranked in the field of trade associations. He told of plans for the conference to be held July 11 to 13 at Cincinnati.

His goal for new members is 1,000, of which the association has well over 800, representing eighty-five per cent of the nursery production in the United States. Mr. LaBar predicts a high plane of business after the war. He cited the building prospects and savings built up as evidence of good business to come. He urged the nurserymen not to let down in replanting, lest when the supply of stock is not available for postwar projects state and federal agencies will have to use

native stock or go into the nursery business to produce the needed material. In regard to raising prices, he thought nurserymen should get their cost of production and a fair profit, but should resist the temptation to gouge the public. That type of business conduct does not make good public relations.

Business Session.

At the business session, Bert Manahan, chairman of the resolutions committee, submitted a resolution to urge members of Congress from Michigan again to pass Senate bill S-417 and House bill 1396, formerly passed by both houses of Congress, but vetoed by the President.

Irvin Cedergreen, Detroit, chairman of the auditing committee, reported finding the books of the treasurer in good order.

Harold E. Hunziker, Niles, read the statement prepared by his committee on uniform replacement agreements. After considerable discussion, the question was referred to a committee for further study.

It was decided to hold the one-day summer meeting at Benton Harbor in early August and the winter meeting the week after the Ohio meeting, at Grand Rapids.

A service honor roll was displayed at the dinner, listing ten members of the families of Michigan Association of Nurserymen firms who are in the service.

A. A. N. Chapter Meets.

Frank S. LaBar sat in with the Michigan members of the A. A. N. and related some details on the inner functioning of the association. Some discussion was held on the advisability of raising the \$10 minimum yearly dues to cover more nearly the average cost of \$30 yearly to service one membership. No action was taken. Chapter officers were elected, the same as those of the Michigan Association of Nurserymen. Two more delegates and a list of alternates were selected. Michigan's representation is increased from four to six on the board of governors. Three new A. A. N. membership applications were turned over to President LaBar.

WHILE the greenhouses of the Roberts Rose Co., Englewood, Colo., have been sold to Godfrey Franc, Denver, John T. Roberts will continue to occupy the residence on the property during the housing shortage and will devote his time to the Roberts Nurseries, Inc., which has extensive plantings south of Littleton.

Meeting Today's Nursery Problems

By A. H. Hill, A. A. N. Regional Director

I have been wondering lately after making the rounds of conventions just how I happened to be off my guard long enough to get talked into serving on the executive committee of the national association. As I remember it, at the time I was assured by some of the fast-talking members that there was nothing to it. All I had to do was to meet once in a while, get some free meals with some of the boys, and hear a lot of inside dope on how to get ahead in the nursery business.

I did not know that I should be called upon to appear on convention programs, but it seems that program committees are getting desperate for something to take up time on their program. I have always maintained that the last place for a nurseryman to turn up was on a program of his own members. There is nothing glamorous about mill-run nurserymen, and I do not feel that as a general rule they add much interest to a convention of this kind.

These program chairmen seem to have a complete disregard of any concern as to whether the speaker might have any ideas to offer on the announced subject. The other day I attended a meeting in Columbus and was assigned to talk about "Government Regulations." My only reaction to that subject is simply that I am not in favor of them, and now I find myself here in Detroit with the high-sounding subject, "Are Our Profits Actually Profits During Wartime Operations?" Why I might be expected to have any inside dope on that subject is a mystery to me. Out home, when we have added up all the expenses at the end of the year, we have considered ourselves lucky to come out even, as we have in several years past. Some of the nurserymen who are much smarter than I am might have an idea to offer. It seems to me as though you have the cart before the horse. My greatest concern is to come through the year with a profit of any kind, no holds barred. Of course, I may be stumbling around in the dark on this subject like a couple of old Irishmen, Dave and Pat Burke. They used to go to town together with a sleigh and a team of horses. They usually spent most of the day getting

fortified for the cold drive home by stopping in at a tavern. One night they started home in a heavy snowstorm with a heavy load of spirits under their belt, and their sleigh slid off the road and got stuck in a ditch. Old Dave and Pat just got down in the bottom of the box and covered up with blankets and went to sleep. During the night one of their neighbors came by, unhitched the horses, and turned the team toward home. Then in the morning dusk Pat and Dave roused up and looked around the landscape. "Where are we, Pat?" said Dave.

Pat looked around in amazement, "I don't know, Dave, where we are, but we either lost the team or else we have found a sleigh."

That is about the same boat we are all in today. Either we have

not sell to the limit of our ability. The danger lies in our failure to make replacements to replenish our supply of stock for future needs. It seems to me a problem of simple arithmetic. You cannot take away continually without eventually ending up with nothing left. Most of us realize this, I am sure, but we may fail to act on it for one reason or another.

Help is scarce, lining-out stock is hard to get and, all in all, it is not an easy thing to go out and do what we know we should do. Any firm which is fortunate enough to have in prospect a profit beyond its immediate needs should make every possible effort to carry out whatever repair to buildings and equipment that can possibly be made. Stock up on supplies of any kind which may be available, to provide for future needs. Anticipate all expenses as far as possible, to guard against the heavier demand on our business in future years.

Anyone who keeps a set of books knows that depreciation of equipment and buildings goes on all the time, and we all charge off a certain amount each year to cover these losses. Charging off these losses is only half of the answer. To be sure, it cuts down on our profits, but it does not build up any actual reserve for repairs. A practice which all of us should follow, if we are not to fool ourselves in the progress we are making, is to take an amount equal to depreciation charged off and place it in a fund actually to provide for machinery, horses and buildings which will eventually have to be repaired or replaced if we are to continue in business over an extended period.

Briefly, I would say that we must replace the stock in our fields in the same proportion that we are using it up during the same season and, secondly, we should set up a fund for replacements and repairs equal to the depreciation we are charging off each year. Unless you do these two things, then I can say that profits in wartime may not be profits at all, but only a dangerous reduction of assets, a liquidation of inventory which can only lead to bad news.

I sincerely wish that I had some short cut around the many problems
[Continued on page 26.]



A. H. Hill.

made a little profit or else we have lost a nursery.

As we spread our operations over a number of years, it is easy gradually to reduce our inventory of nursery stock, which we have produced over a considerable period, realizing a profit in one or two years which should represent a part of our assets to insure our future security.

There are so many personal and business problems to harass us all in these troublesome times that we may sometimes fail to think clearly on matters which affect the sound operation of our business. As I see it, there is no reason why we should

Talk by A. H. Hill, Dundee, Ill., before the Michigan Association of Nurserymen, at Detroit, January 28.

FRUIT TREES

We have just completed our grading and estimate that we have available the quantities on these pages. All stock is well grown, liberally graded and strictly No. 1. This stock is offered subject to prior sale.

Orders for an assortment of both Ornamentals and Fruit Trees will be given preference. Our complete Spring Trade List will be ready about February 15.

Due to the strong demand and the limited supply available, these Fruit Trees, except a few surplus varieties of 11/16-inch Apple, are offered only on orders carrying a general assortment of Ornamental Stock.

TERMS: Cash with order except to those with established credit or satisfactory trade references. C.O.D. orders must be accompanied by one-fourth cash.

BOXING EXTRA, at cost.

SHIPMENTS. Most items are now ready for immediate shipment. Specify shipping date desired.

WHOLESALE ONLY.

APPLE

	Per 100	Per 1000
11/16-inch and up.....	\$50.00	\$450.00
9/16 to 11/16-inch.....	42.00	380.00
(300 or more Apple supplied at 1,000 rate.)		

	11/16	9/16		11/16	9/16		11/16	9/16
Anoka	500	200	Forest Winter	300	100	Rome Beauty Red.....	500	.....
Banana	250	50	Golden Russet	300	200	Salome	200	.....
Black Ben Davis.....	500	.....	Haralson .....	.....	300	Stayman Winesap	500	.....
Chenango	400	100	Hibernal	600	.....	Sweet Russet	400	.....
Delicious Red	4000	1000	Hyslop	250	.....	Tolman Sweet	400	.....
Delicious Yellow	2400	500	Jonathan	600	.....	Turley	500	.....
Dolgo Crab	500	200	Maiden Blush	400	.....	Virginia Crab	1000	.....
Duchess Red	1500	.....	M. B. Twig	500	.....	Wealthy	600	.....
Early Harvest	500	.....	Northern Spy Red.....	1000	250	Whitney	1800	300
Fameuse	250	.....	N. W. Greening.....	700	.....	Winesap	2200	300
Flame Crab	500	100	Red Siberian Crab.....	200	.....		

Good assortment of standard varieties of Apple, 7/8 to 1-inch caliper, \$60.00 per 100.

PEACH

PEACH				Per 100
7/16 to 9/16-inch.....				\$40.00
5/16 to 7/16-inch.....				30.00
2 to 3 feet, under 5/16-inch.....				22.00
18 to 24 inches.....				18.00
	7/16	5/16	2/3	18/24
Belle of Georgia.....	600	600	250	200
Carman	400			
Champion	300	700	600	250
Early Elberta	700	500	250	800
Elberta	1500	500		
Gold Drop	600	300	450	300
Golden Jubilee	1000			
Halehaven	1000	600	400	
Heath Cling	800			
J. H. Hale.....	500			
Mikado	450			
Mixon Cling	200	120		
Rochester	500	100		
Shipper's Late Red.....	300		500	280
Valiant		800	600	500
Vedette	300	200		
Veteran		400	350	700

Immediately Available!
LOVELL PEACH PITS
100 bushel, 1943 crop, at \$3.00 per bu.

Wire your order today.



E.S. Welch PRES.

CHERRY, SOUR AND SWEET

Due to limited supply, Sour and Sweet Cherry are available only in connection with a general assortment of stock.

SOUR.						Per 100
1-inch and up.....						\$85.00
11/16-inch and up.....						75.00
9/16 to 11/16-inch.....						65.00
7/16 to 9/16-inch.....						50.00
5/16 to 7/16-inch.....						40.00
	1-Inch	11/16	9/16	7/16	5/16	
Early Richmond	500					600
Montmorency	500	500	400	750		1250
SWEET.						Per 100
7/16 to 9/16-inch.....						\$60.00
5/16 to 7/16-inch.....						50.00
				7/16	5/16	
Black Tartarian				300		800
Governor Wood				250		250
Lambert				150		250
Napoleon				600		800
Schmidt's Big				900		500
Windsor				400		500

CHERRY, MULTI-VARIETY

	Per 10
9/16-inch and up.....	
180 5-N-1 5 best varieties on same tree.....	\$12.50
270 4-N-1 4 best varieties on same tree.....	10.00

PLUM, MULTI-VARIETY

	Per 10
9/16-inch and up.....	
450 5-N-1 5 best varieties on same tree.....	\$12.50
450 4-N-1 4 best varieties on same tree.....	10.00

Prices subject to prior sale and to change without notice.
Send complete Want List for special quotation.

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MOUNT ARBOR NURSERIES
SHENANDOAH, IOWA

SHADE TREES

Order from these pages! Stock is very scarce and moving out rapidly.
Don't delay. Wire or mail your orders today.

ASH, GREEN.	Per 100	LINDEN, AMERICAN		OAK, WHITE.	Per 100
500 6 to 8 ft.....	\$ 45.00	PYRAMIDAL.	Per 100	600 6 to 8 ft.....	\$125.00
1000 8 to 10 ft.....	70.00	150 6 to 8 ft.....	\$100.00	500 8 to 10 ft.....	175.00
200 1½ to 2 ins.....	100.00	100 8 to 10 ft.....	135.00	300 1½ to 2 ins.....	250.00
BIRCH, CUTLEAF WEEPING.		MAPLE, NORWAY.		150 2 to 2½ ins.....	350.00
250 6 to 8 ft.....	135.00	250 6 to 8 ft., branched.....	100.00	POPLAR, BOLLEANA.	
250 8 to 10 ft.....	175.00	400 8 to 10 ft., branched.....	135.00	500 8 to 10 ft.....	65.00
BIRCH, EUROPEAN WHITE.		500 1½ to 1¾ ins.....	200.00	500 1½ to 2 ins.....	100.00
300 6 to 8 ft.....	80.00	400 1¾ to 2 ins.....	235.00	POPLAR, LOMBARDY.	
100 8 to 10 ft.....	110.00	100 2 to 2½ ins.....	300.00	1200 6 to 8 ft.....	22.00
6 to 8 feet, clump form, 3 branches and up.....	100.00	MAPLE, SCHWEDLERI.		1500 8 to 10 ft.....	28.00
ELM, AMERICAN WHITE.		500 6 to 8 ft., branched.....	175.00	1500 1½ to 2 ins.....	60.00
500 1¼ to 1½ ins.....	85.00	500 8 to 10 ft., branched.....	200.00	PRUNUS TOMENTOSUM,	
1000 1½ to 2 ins.....	135.00	200 6 to 8 ft., whips.....	85.00	NANKING CHERRY.	
1000 2 to 2½ ins.....	200.00	250 5 to 6 ft., whips.....	75.00	300 3 to 4 ft.....	35.00
ELM, CHINESE.		500 4 to 5 ft., whips.....	60.00	500 4 to 5 ft.....	45.00
1000 6 to 8 ft.....	40.00	300 3 to 4 ft., whips.....	50.00	PRUNUS TRILOBA.	
1000 8 to 10 ft.....	55.00	MAPLE, SILVER.		250 18 to 24 ins.....	25.00
1000 1½ to 2 ins.....	100.00	250 1½ to 2 ins.....	110.00	300 2 to 3 ft.....	30.00
ELM, ENGLISH.		250 2 to 2½ ins.....	150.00	300 3 to 4 ft.....	40.00
150 5 to 6 ft.....	70.00	MAPLE, SUGAR.		THORN, CORDATA.	
200 6 to 8 ft.....	90.00	200 8 to 10 ft.....	140.00	200 5 to 6 ft.....	110.00
100 8 to 10 ft.....	125.00	300 1¼ to 1½ ins.....	165.00	150 6 to 8 ft.....	150.00
ELM, MOLINE.		200 1½ to 1¾ ins.....	200.00	THORN, CRUSGALLI.	
400 1½ to 2 ins.....	175.00	MOUNTAIN ASH, EUROPEAN.		300 4 to 5 ft.....	80.00
500 2 to 2½ ins.....	235.00	200 6 to 8 ft.....	85.00	400 5 to 6 ft.....	110.00
200 2½ to 3 ins.....	300.00	300 8 to 10 ft.....	100.00	150 6 to 8 ft.....	175.00
HACKBERRY.		300 1½ to 2 ins.....	135.00	THORN, MOLLIS.	
500 6 to 8 ft.....	60.00	OAK, PIN.		400 3 to 4 ft.....	40.00
1000 8 to 10 ft.....	90.00	500 6 to 8 ft.....	125.00	500 4 to 5 ft.....	60.00
500 1½ to 2 ins.....	135.00	500 8 to 10 ft.....	175.00	600 5 to 6 ft.....	90.00
300 2 to 2½ ins.....	200.00	500 1½ to 2 ins.....	250.00	600 6 to 8 ft.....	125.00
HONEY LOCUST.		400 2 to 2½ ins.....	350.00	WILLOW, NIOBE.	
400 6 to 8 ft.....	60.00	OAK, RED.		500 3 to 4 ft.....	18.00
600 8 to 10 ft.....	85.00	500 6 to 8 ft.....	140.00	800 4 to 5 ft.....	25.00
500 1½ to 2 ins.....	135.00	500 8 to 10 ft.....	200.00	300 5 to 6 ft.....	40.00
LINDEN, AMERICAN.		300 1½ to 2 ins.....	275.00	200 6 to 8 ft.....	65.00
300 6 to 8 ft.....	80.00	100 2 to 2½ ins.....	375.00		
200 8 to 10 ft.....	100.00				
400 1½ to 2 ins.....	135.00				

VINES

AMPELOPSIS,		AMPELOPSIS QUINQUEFOLIA.		CELASTRUS SCANDENS.	Per 100
BOSTON IVY.	Per 100		Per 100	600 3-year No. 1.....	\$20.00
500 2-year No. 1.....	\$25.00	1000 3-year No. 1.....	\$18.00	1200 2-year No. 1.....	16.00
500 2-year Medium.....	20.00	2000 2-year No. 1.....	14.00	400 2-year Medium.....	12.00
AMPELOPSIS ENGELMANNI.		1000 2-year Medium.....	10.00	HONEYSUCKLE HECKROTTI.	
600 3-year No. 1.....	18.00	WISTERIA, AMERICAN PURPLE,		500 2-year No. 1.....	22.00
1400 2-year No. 1.....	14.00	Blooming Type.		500 2-year Medium.....	18.00
800 2-year Medium.....	10.00	1500 3-year No. 1.....	20.00	POLYGONUM AUBERTI.	
		1500 2-year No. 1.....	15.00	3000 2-year No. 1.....	25.00
		500 2-year Medium.....	12.00	800 2-year Medium.....	20.00

For SHRUBS see following page.

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PRICES—Per 100

4 to 5 feet.....	\$25.00
3 to 4 feet.....	20.00
2 to 3 feet.....	16.00
18 to 24 inches.....	12.00

	4 to 5	3 to 4	2 to 3	18 to 24		4 to 5	3 to 4	2 to 3	18 to 24
Cornus Alba Sibirica	1000	1500	500	.....	Physocarpus Opulifolius	150	300	200	.....
Cornus Paniculata	300	400	1000	600	Physocarpus Goldleaf Ninebark	300	500	500	200
Cornus Stolonifera	300	750	500	.....	Physocarpus Dwarf Ninebark	300	300	400	.....
Cotoneaster Acutifolia	300	1000	500	.....	Spiraea Arguta .....	.....	400	300	300
Deutzia Pride of Rochester	150	500	200	.....	Spiraea Billardi .....	.....	500	500	200
Deutzia Scabra Plena .....	.....	50	500	.....	Spiraea Froebeli .....	.....	600	2000	2500
Philadelphus Coronarius	200	1500	500	.....	Tamarix Hispanica .....	.....	800	1000	500

PRICES—Per 100

4 to 5 feet.....	\$30.00
3 to 4 feet.....	25.00
2 to 3 feet.....	20.00
18 to 24 inches.....	15.00

	4 to 5	3 to 4	2 to 3	18 to 24
Cornus Golden Twig	140	400	800	400
Forsythia Fortunei	150	500	1000	.....
Forsythia Intermedia	150	500	800	.....
Forsythia Spectabilis	500	1000	1000	.....
Honeysuckle Bella Albida	200	300	200	.....
Honeysuckle Pink and Red Tatarian	500	1200	600	.....
Lilac Rothomagensis	1500	1000	500	.....
Viburnum Dentatum	150	1000	500	500
Viburnum Lantana	300	600	400	.....
Viburnum Lentago	300	1000	1000	250
Viburnum Molle	200	400	300	.....

PRICES—Per 100

3 to 4 feet.....	\$30.00
2 to 3 feet.....	25.00
18 to 24 inches.....	20.00

	3 to 4	2 to 3	18 to 24
Acanthopanax Pentaphyllum	500	350	.....
Almond, Pink—own roots.....	600	500	.....
Cydonia Japonica	2000	2000	500
Euonymus Europaeus	250	150	.....
Euonymus Atropurpureus	400	600	400
Hamamelis Virginiana .....	.....	.....	250
Ilex Verticillata	150	800	800
Lilac, Dr. Breitenschneider	400	100	.....
Lilac Josikaea	1200	500	.....
Lilac Villosa	100	250	400
Rhus Canadensis	100	1600	1200
Ribes Alpinum .....	.....	500	1500
Spiraea Thunbergi .....	.....	800	200
Viburnum Opulus	800	600	900
Viburnum Opulus Sterile	500	1000	200

	Per 100
Barberry Thunbergi, 8000 2 to 2½ ft.....	\$15.00
5000 18 to 24 ins.....	12.00
6000 15 to 18 ins.....	10.00
Butterfly Bush, Ile de France, 1500 No. 1.....	18.00
Butterfly Bush, Concord, 1200 No. 1.....	20.00
Butterfly Bush, Dubonnet, 2500 No. 1.....	20.00
Butterfly Bush, Empire Blue, 300 No. 1.....	35.00
Butterfly Bush, Royal Red, 1500 No. 1.....	35.00

	Per 100
Deutzia Gracilis, 900 9 to 12 ins.....	\$14.00
900 12 to 15 ins.....	20.00
Euonymus Alatus, 150 3 to 4 ft.....	65.00
400 2 to 3 ft.....	45.00
Euonymus Alatus Compacta, 200 2 to 3 ft.....	75.00
Hydrangea P. G., 500 2 to 3 ft.....	30.00
800 18 to 24 ins.....	25.00
1500 12 to 18 ins.....	18.00
Philadelphus Aureus, 400 12 to 15 ins.....	25.00
Philadelphus Virginal, 300 4 to 5 ft.....	50.00
700 3 to 4 ft.....	45.00

	Per 100
Spiraea A. W., 2000 2 to 2½ ft.....	\$22.00
2500 18 to 24 ins.....	18.00
1000 15 to 18 ins.....	16.00
Spiraea Vanhouttei, 1500 4 to 5 ft.....	22.00
2500 3 to 4 ft.....	16.00
2500 2 to 3 ft.....	12.00
Symphoricarpos Vulgaris, 2500 2 to 3 ft.....	12.00
2000 18 to 24 ins.....	8.00
Weigela Eva Rathke, 500 2 to 3 ft.....	28.00
500 18 to 24 ins.....	22.00



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Sheared specimens. Three times transplanted. All wanted varieties and grades. Order from our Fall Trade List or send Want List.

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Honor New Jersey Group for War Effort

By P. P. Pirone

The nurserymen's part in the war effort and in the postwar period were featured in discussions at the annual meeting of the New Jersey Association of Nurserymen, at the Hotel Hildebrecht, Trenton, January 26. Probably the highlight of the one-day meeting was the presentation of a food production certificate to the association by secretary of agriculture, Willard H. Allen, in recognition of the contribution made by its members in the production of vegetables, fruits and meat. In awarding the certificate to the association's president, Arthur Levick, Secretary Allen pointed out that, while other agricultural groups produced more of each of their respective crops, New Jersey nurserymen were to be especially commended because they turned over into food production land which they normally devoted to the production of trees and flowers. He felt that their contribution required greater sacrifice than some of the other agricultural groups.

A survey made by the secretary of the association showed that about twenty-five members devoted more than 700 acres to the production of beans, tomatoes, sweet corn and other vegetables, that thousands of square feet of greenhouse space was turned over to tomato production, that millions of plants were grown for victory gardens and that thousands of chickens were raised.

Officers Elected.

C. Russel Jacobus, of Upper Montclair, was elected president to succeed Arthur Levick, of Bridgeton. Kurt Meyer, Hackettstown, now in the armed forces with the Seabees, was elected first vice-president, and George White, of Bobbink & Atkins, East Rutherford, second vice-president. Dr. P. P. Pirone is secretary and August Kindsgrab treasurer. Elected to the board of directors were Walter Ritchie, Rahway; William Hallicy, Clifton, also in the Seabees, and Conrad Marchalk, Clifton.

During the business meeting, George Jennings, Ralston, presented a progress report of his committee on better planting standards. A bulletin on this subject is now in final stages of preparation, and it is hoped that it will be available to prospective home buyers or builders as soon as the war ends, he said. Mr. Jennings pointed out that there are two

ways by which the public can be taught to appreciate better plantings around the home. One is by the example set by N. J. A. N. members in making better plantings, and the second is by educational material supplied through talks to garden clubs, magazines and newspapers.

E. L. D. Seymour, horticultural editor of American Home, spoke briefly on the same subject. He stated that any literature pertaining to landscape plantings should be prepared in simple language so that the average person will understand it. Mr. Seymour thought that nurserymen should help to foster the idea of planting living memorials such as



Frank S. LaBar.

parks and recreation areas for the men in the armed forces. Such memorials are more beautiful than stone memorials, will serve for a long time and increase in value as they age.

The scheduled talks at the morning session dealt mainly with food production. Prof. L. G. Schermerhorn, who developed the well known Rutgers tomato, pointed out that nurserymen can do much to help the over-all food production program this year by recommending or supplying to victory gardeners the best varieties for New Jersey conditions. He felt that when the swing toward the growing of flowers and shrubs occurs, the help now given to victory gardeners would be remembered, provided the nurserymen build up good will at this time.

Dr. O. W. Davidson, of the Rutgers department of horticulture,

presented the highlights of tomato culture under glass. He stressed the fact that unless the plant makes the proper type of growth, the crop will not be profitable. Only a so-called forcing variety should be grown, because its rate of growth can be more easily regulated than outdoor varieties. The three varieties which seem to do best under New Jersey conditions are old Bonnie Best, Michigan State Forcing and Waltham Forcing.

The afternoon session was opened with a talk by Prof. K. R. Slamp, of the New Jersey extension service, on vegetable marketing problems. He pointed out that anyone growing vegetables on a commercial scale has four immediate problems, transportation, prices, labor and packaging.

Frank S. LaBar, A. A. N. president, told of his being "bottle-scarred and weary" after more than a month's travel around the country. He stated that the A. A. N. now has 844 members and that this membership does more than eighty-five per cent of the total nursery business in the country. Mr. LaBar was followed by the A. A. N. executive secretary, Dr. R. P. White, who described some of the activities of the A. A. N. in wartime and some of its planned work for the postwar period. He told of the survey on postwar markets, which is being published now in the American Nurseryman. Dr. White predicted that the labor situation will be eased somewhat by fall. He suggested that every nurseryman should spend some money on building up an inventory of plant materials for the postwar market. New homes, large housing projects and highway construction will require tremendous amounts of plant materials, and nurserymen should get ready for this market.

The featured speaker at the morning session was Dr. L. C. Chadwick, of Ohio State University, who spoke on "The Nursery Industry and the Postwar Period."

"Most of the postwar planning now under way is just wishful thinking," said Dr. Chadwick. "Each individual nurseryman must make his own postwar plans, and the plan must be flexible enough so that changes can be made to fit the changes which cannot be foreseen, but which are bound to occur."

"Human nature doesn't change

CHOICE LINING-OUT STOCK

	Per 100	Per 1000		Per 100	Per 1000		Per 100	Per 1000
Pinus banksiana, Jack Pine.			Taxus cuspidata, Spreading Yew.			Thuja occidentalis hoveyi,		
S., 3 to 6 ins.	\$3.00	\$ 18.00	T., 6 to 8 ins.	\$12.00	\$100.00	Hovey Globe Arborvitae.	\$12.00	\$100.00
T., 10 to 18 ins.	4.00	25.00	T., 8 to 12 ins.	18.00	150.00	T., 6 to 8 ins.	12.00	100.00
Pinus densiflora, Red Pine.			T., 10 to 12 ins.	20.00	180.00	TT., 10 to 12 ins.	22.00	200.00
S., 5 to 10 ins.	2.50	14.00	Taxus cuspidata brevifolia,			TT., 12 to 15 ins.	25.00	250.00
S., 10 to 18 ins.	3.25	18.00	Dwarf Spreading Yew.			Thuja occidentalis lutea,		
T., 8 to 16 ins.	3.50	22.00	T., 5 to 7 ins.	16.00	150.00	Geo. Peabody Arborvitae.	30.00	300.00
Pinus flexilis, Limber Pine.			T., 6 to 10 ins.	20.00	190.00	TT., 15 to 18 ins.	30.00	300.00
T., 6 to 12 ins.	7.00	60.00	Taxus cuspidata capitata, Upright Yew.					
Pinus montana, Swiss Mountain Pine.			2-yr., S., 2 to 4 ins.	7.00	60.00	Thuja occidentalis nigra,		
S., 5 to 10 ins.	3.00	16.00	3-yr., S., 3 to 6 ins.	8.00	75.00	Dark American Arborvitae.		
T., 3 to 6 ins.	4.50	30.00	T., 8 to 12 ins.	20.00	190.00	T., 6 to 8 ins.	\$12.00	\$100.00
T., 8 to 14 ins.	4.00	40.00	Taxus cuspidata thayerae, Thayer Yew.			TT., 12 to 15 ins.	15.00	120.00
Pinus montana mughus, Mugho Pine.			T., 8 to 10 ins.	20.00	180.00			
S., 2 to 4 ins.	3.00	16.00	TT., 10 to 15 ins.	25.00	200.00			
S., 3 to 6 ins.	4.00	22.00	Taxus intermedia, Intermediate Yew.					
T., 3 to 6 ins.	6.00	50.00	T., 5 to 7 ins.	18.00	150.00			
Pinus montana mughus compacta,			Taxus intermedia browni, Brown Yew.					
Mugho Pine.			T., 5 to 7 ins.	18.00	150.00			
T., 4 to 8 ins.	7.00	60.00	T., 8 to 10 ins.	20.00	180.00			
Pinus nigra (austriaca), Austrian Pine.			TT., 8 to 10 ins.	25.00	200.00			
S., 3 to 7 ins.	3.50	25.00	Taxus intermedia halloriana, Halloran Yew.					
T., 8 to 16 ins.	6.00	50.00	(New introduction.)					
S., 10 to 12 ins.	5.00	40.00	T., 6 to 8 ins.	25.00	200.00			
T., 12 to 18 ins.	10.00	90.00	Taxus intermedia hunnewelliana,					
S., 8 to 12 ins.	15.00	120.00	Hunnewell Yew.					
TT., 15 to 24 ins.	25.00	250.00	T., 5 to 7 ins.	18.00	150.00			
Pinus resinosa, Norway Red Pine.			Taxus media hatfieldi, Hatfield Yew.					
S., 10 to 12 ins.	3.00	20.00	T., 6 to 8 ins.	15.00	140.00			
T., 4 to 8 ins.	3.50	30.00	T., 8 to 10 ins.	18.00	175.00			
S., 8 to 16 ins.	5.00	40.00	Taxus media hicksi, Hicks Yew.					
Pinus rigida, Pitch Pine.			T., 6 to 8 ins.	12.00	110.00			
S., 5 to 9 ins.	2.00	12.00	T., 8 to 10 ins.	15.00	140.00			
T., 10 to 16 ins.	3.50	20.00	T., 10 to 12 ins.	20.00	190.00			
S., 10 to 18 ins.	2.50	15.00	Taxus media pyramidalis, Pyramidal Yew.					
Pinus strobus, White Pine.			T., 8 to 10 ins.	18.00	150.00			
S., 3 to 5 ins.	3.00	20.00	Thuja occidentalis, American Arborvitae.					
S., 5 to 10 ins.	3.00	25.00	S., 2 to 4 ins.	3.00	18.00			
T., 5 to 10 ins.	4.50	35.00	S., 5 to 10 ins.	4.00	25.00			
T., 12 to 20 ins.	7.00	50.00	T., 6 to 12 ins.	6.00	40.00			
Pinus sylvestris (H. B. Special), Scotch Pine.			T., 12 to 24 ins.	7.00	60.00			
S., 4 to 8 ins.	3.50	22.00	TT., 18 to 24 ins.	14.00	120.00			
S., 10 to 18 ins.	3.75	25.00	Thuja occidentalis boothi, Booth Arborvitae.					
T., 10 to 16 ins.	4.50	30.00	T., 6 to 9 ins.	15.00	120.00			
TT., 15 to 18 ins.	18.00	180.00	Thuja occidentalis brubakeri,					
Pinus thunbergi, Thunberg's Black Pine.			Brubaker Arborvitae (New).					
S., 5 to 9 ins.	3.00	20.00	T., 5 to 10 ins.	16.00	150.00			
S., 9 to 18 ins.	3.50	30.00	TT., 15 to 18 ins.	25.00	250.00			
Pseudotsuga douglasii, Douglas Fir.			TT., 18 to 24 ins.	35.00	350.00			
S., 10 to 16 ins.	4.50	30.00	Thuja occidentalis compacta,					
T., 4 to 7 ins.	3.50	27.50	Parsons Globe Arborvitae.					
T., 6 to 9 ins.	5.50	40.00	T., 6 to 12 ins.	15.00	120.00			
T., 9 to 15 ins.	7.00	60.00	T., 8 to 10 ins.	18.00	150.00			
Sorbus americana.			TT., 10 to 12 ins.	25.00	250.00			
S., 2 to 5 ft.	4.50	30.00	Thuja occidentalis douglasii aurea,					
Sorbus aucuparia.			Douglas Golden Arborvitae.					
2-yr., T., 4 to 6 ft.	30.00	250.00	TT., 10 to 12 ins.	15.00	120.00			
T., 6 to 8 ft.	50.00	400.00	Thuja occidentalis elegantissima,					
T., 8 to 10 ft.	75.00	650.00	Gold Tipped Arborvitae.					
Taxus baccata repandens,			TT., 12 to 15 ins.	18.00	150.00			
Spreading English Yew.			Thuja occidentalis globosa,					
1-yr., TT., 6 to 8 ins.	25.00	250.00	American Globe Arborvitae.					
Taxus canadensis, Canadian Yew.			TT., 8 to 10 ins.	18.00	150.00			
TT., 8 to 12 ins.	25.00	200.00	TT., 10 to 12 ins.	25.00	250.00			
Taxus canadensis stricta, Dwarf Hedge Yew.								
TT., 8 to 10 ins.	30.00	250.00						

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nursery industry. Both recipients were unable to be present. Mrs. P. M. Koster accepted the award for her husband and George Jennings, Ralston, accepted for Lieutenant Blackburn.

A. A. N. Chapter Meets.

At the conclusion of the regular meeting, New Jersey members of the A. A. N. elected C. W. M. Hess, Mountain View; William Flemer, Princeton, and C. R. Jacobus, Upper Montclair, as the delegates to the A. A. N. convention. The two other delegates, elected last year, were Walter Ritchie, Rahway, and Samuel Blair, Nutley.

CATALOGUES RECEIVED.

Welch Nurseries, Shenandoah, Ia.—Retail catalogue of fruits, shrubs and perennials, illustrated in color, 32 pages, 6¼x10¼ inches.

Cunningham Gardens, Waldron, Ind.—Wholesale price list of garden chrysanthemums, one sheet, 5½x9¼ inches. Retail list of chrysanthemums, peonies and phlox, illustrated in color, one sheet folded to 5½x9¼ inches.

Gurney Seed & Nursery Co., Yankton, S. D.—Retail catalogue of nursery stock, vegetable and flower seeds, roses and insecticides, well illustrated, partly in color, 48 pages, 10¼x14½ inches.

T. G. Owen & Son, Inc., Columbus, Miss.—Wholesale price list of evergreens, 36 pages and cover, 3¼x9 inches.

George J. Ball, Inc., West Chicago, Ill.—Catalogue of seeds for florists including,

in addition to a full list of annuals, miscellaneous perennials, vegetable seeds and plant bands; 48 pages and cover, 7½x10¾ inches.

GRAND RAPIDS ELECTION.

Arthur L. Watson was elected president of the Grand Rapids Nursery and Landscape Association at its annual meeting, held January 21, in the Pantlind hotel, Grand Rapids, Mich. Other new officers are as follows: Vice-president, Ernest Durant; secretary-treasurer, John Kuizer. Executive committeemen are Rolland Tisch and Claude Jones.

Harold Hunziker, Niles, addressed the members of the organization on cost finding.

Postwar Markets for Nursery Stock

By Richard P. White, Secretary, American Association of Nurserymen

The axiom that "prices for a finished product determine the demand for raw materials" is probably no truer anywhere than in the field of fruit production. High prices for fruit will stimulate demand for fruit tree stock more than any other one factor. However, that there are other factors must not be overlooked, and these factors will probably play as important a part collectively as the factor of price in the immediate postwar years. In fact, we may be confronted in the immediate postwar era by the price factor and other innumerable factors working in the same general direction.

Before we can intelligently discuss the information or appreciate the significance of the viewpoints of many outstanding horticulturists of the country, we must take a few minutes to develop a suitable background for the picture to be presented.

That there has been a general and gradual decline in productive orchards and vineyards over the past twenty or more years is a well recognized fact. For example, the number of apple trees of bearing age in the country has decreased fifty per cent in the past twenty years and the number of nonbearing trees has declined sixty-six per cent.

Peaches have declined thirty-eight per cent in bearing trees, but have just about held their own in numbers of nonbearing trees. Apricots, on the other hand, show a reduction of thirty per cent in nonbearing trees, but have held their own in bearing ages.

Pears in the past twenty years show a reduction of fifteen per cent in bearing trees and sixty-six per cent in trees of nonbearing age. Plums and prunes have held their own during the past twenty years in trees of bearing ages, but when one considers trees of nonbearing ages, a decrease of almost seventy per cent is reported.

Cherries have just about maintained their position over the past twenty years in both trees of bearing and nonbearing ages.

All small fruits have declined in acreage in the past ten years about seventeen per cent.

Production figures, however, indicate an equal or increased harvest, exclusive of annual variations, because of uncontrollable climatic factors. Value of the crops, however,

This is the second in a series of articles reporting data on different phases of the postwar market for nursery stock and the factors influencing it, as compiled at the executive headquarters of the American Association of Nurserymen. The first article, in the preceding issue, carried introductory comments and presented the possibilities of the postwar housing market. Subsequent articles will present the anticipated development of parks and highways after victory.

again excluding annual disturbances, has shown, in spite of increased total quantities, a decided and serious downward trend.

The apple crop in 1920 was valued at \$241,000,000. A ten per cent greater harvest in 1940 was valued at only \$97,000,000.

The cherry crop of 1920 valued at \$14,000,000 can be compared to the cherry crop of 1940, thirty per cent greater than in 1929, but valued at only \$9,000,000 — a thirty per cent increase in harvest and a thirty-five per cent decrease in gross returns.

Peaches in 1920 returned \$95,000,000 to the producers. A ten

per cent greater crop in 1940 returned only \$45,000,000, less than half.

Apricots show even greater fluctuations. Almost double the harvest in 1940, as compared to 1920, yielded only seventy-five per cent as many dollars.

These census data indicate the uncertainty of returns in the fruit industry over long periods of years. Until this uncertainty is removed, by some means or other, the commercial orchardist will not be a stable year-in-year-out market for our commodity. The stability or uncertainty in fruit production is directly reflected as stability or uncertainty in the industry back of fruit production—namely the nursery industry.

Prices for fruit for the past fifteen years in general have been uncertain and low, in many instances not returning profits to the grower. Our export markets have all but disappeared because of the war. The Armistice day freeze of 1940 effectively removed thousands of bearing trees in the northern and central plains area, including the states of Kansas, Nebraska, Iowa and north-west Missouri.

Through the operation of the AAA program to pay for the removal of marginal trees, approximately 2,000,000 more trees of bear-

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Keep up your inventory for the good times ahead.

American Arborvitae,	Per 1000
4 to 6-in. sdg.	\$35.00
American Arborvitae,	
6 to 10-in. sdg.	50.00
Douglas Fir, 4 to 6-in. sdg.	20.00
Douglas Fir, 6 to 10-in. sdg.	35.00
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Austrian Pine, 12 to 15-in. tr.	110.00
Jack Pine, 6 to 10-in. sdg.	20.00
Jack Pine, 10 to 12-in. sdg.	30.00
Ulmata Pine, 6 to 10-in. tr.	75.00
Ulmata Pine, 10 to 12-in. tr.	80.00
Mugho Pine, 10 to 12-in. sdg.	75.00
Mugho Pine, 6 to 10-in. tr.	80.00
Mugho Pine, 10 to 12-in. tr.	90.00
Mugho Pine, 12 to 15-in. tr.	100.00
Norway Pine, 4 to 6-in. sdg.	25.00
Norway Pine, 6 to 10-in. tr.	65.00
Scotch Pine, 6 to 10-in. sdg.	40.00
Scotch Pine, 10 to 12-in. tr.	65.00
Black Hills Spruce, 4 to 6-in. sdg.	40.00
Black Hills Spruce, 6 to 10-in. tr.	75.00
Colorado Blue Spruce,	
4 to 6-in. sdg.	25.00
Colorado Blue Spruce,	
4 to 6-in. tr.	40.00
Norway Spruce, 4 to 6-in. sdg.	15.00
Norway Spruce, 6 to 10-in. sdg.	20.00
Norway Spruce, 10 to 12-in. sdg.	30.00
Norway Spruce, 4 to 6-in. tr.	30.00
Norway Spruce, 6 to 10-in. tr.	40.00
Norway Spruce, 10 to 12-in. tr.	60.00
White Spruce, 4 to 6-in. sdg.	15.00
White Spruce, 6 to 10-in. sdg.	25.00
White Spruce, 10 to 12-in. sdg.	30.00
White Spruce, 6 to 10-in. tr.	45.00
White Spruce, 10 to 12-in. tr.	60.00

(Note.—300 trees of a size may be purchased at 1,000 rate.)

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From 2½-inch pots.—Note sizes.

	Per 100
Arborvitae Compacta, 6 to 10 ins.	\$12.00
Arborvitae Douglas Golden,	
4 to 6 ins.	10.00
Arborvitae Globosa, 4 to 6 ins.	10.00
Arborvitae Pyramidalis, 2 to 4 ins.	6.00
Arborvitae Pyramidalis, 4 to 6 ins.	8.50
Arborvitae Pyramidalis, 6 to 10 ins.	10.00
Arborvitae Shermani, 4 to 6 ins.	10.00
Arborvitae Shermani, 6 to 10 ins.	12.00
Arborvitae Vervaeckiana, 4 to 6 ins.	8.00
Juniper Andorra, 4 to 6 ins.	10.00
Juniper Andorra, 6 to 10 ins.	12.00
Juniper Pfitzer, 6 to 10 ins.	15.00
Juniper Pfitzer, 10 to 12 ins.	17.00
Juniper, Irish, 4 to 6 ins.	14.00
Juniper, Swedish, 4 to 6 ins.	14.00
Juniper, Swedish, 6 to 10 ins.	17.00
Juniper Waukegan, 6 to 10 ins.	12.00
Juniper Waukegan, 10 to 12 ins.	14.00
Juniper Kosteri, 4 to 6 ins.	10.00
Juniper Kosteri, 6 to 10 ins.	15.00
Juniper Sabina, 4 to 6 ins.	12.00
Juniper Sabina, 6 to 10 ins.	15.00
Juniper Sabina, 10 to 12 ins.	17.00
Juniper Sabina Horizontalis,	
6 to 10 ins.	12.00
Juniper Sabina Von Ehron,	
6 to 10 ins.	15.00

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	Per 100		Per 100		Per 100
100 Acanthopanax pentaphyllum, 18 to 24 ins.	\$15.00	200 Euonymus yedoensis, 2 to 3 ft.	\$28.00	700 Symphoricarpos racemosus, 2 to 3 ft.	\$14.00
200 Acanthopanax pentaphyllum, 2 to 3 ft.	28.00	300 Euonymus yedoensis, 3 to 4 ft.	30.00	500 Symphoricarpos racemosus, 3 to 4 ft.	18.00
250 Acanthopanax pentaphyllum, 3 to 4 ft.	35.00	100 Forsythia, dwarf, 2 to 3 ft.	25.00	400 Symphoricarpos vulgaris, 2 to 3 ft.	14.00
100 Acanthopanax pentaphyllum, 4 to 5 ft.	45.00	200 Forsythia, dwarf, 3 to 4 ft.	30.00	300 Symphoricarpos vulgaris, 3 to 4 ft.	18.00
200 Aronia arbutifolia, 15 to 18 ins.	15.00	200 Forsythia spectabilis, 18 to 24 ins.	15.00	100 Syringa villosa, 18 to 24 ins.	20.00
100 Aronia arbutifolia, 2 to 3 ft.	25.00	300 Lonicera bella alba, 2 to 3 ft.	20.00	150 Syringa villosa, 2 to 3 ft.	25.00
400 Aronia melanocarpa, 15 to 18 ins.	15.00	100 Lonicera korolkovi, 3 to 4 ft.	40.00	150 Syringa vulgaris, 18 to 24 ins.	16.00
400 Aronia melanocarpa, 18 to 24 ins.	18.00	100 Lonicera korolkovi, 4 to 5 ft.	50.00	100 Syringa vulgaris, 2 to 3 ft.	20.00
200 Aronia melanocarpa, 2 to 3 ft.	25.00	100 Lonicera morrowi, 18 to 24 ins.	20.00	200 Syringa vulgaris alba, 3 to 4 ft.	32.00
200 Berberis koreana, 12 to 15 ins.	15.00	300 Lonicera morrowi, 2 to 3 ft.	22.00	100 Viburnum americana, 18 to 24 ins.	25.00
300 Berberis koreana, 15 to 18 ins.	20.00	400 Lonicera morrowi, 3 to 4 ft.	30.00	200 Viburnum americana, 2 to 3 ft.	30.00
100 Berberis koreana, 18 to 24 ins.	28.00	150 Lonicera syringantha, 2 to 3 ft.	40.00	150 Viburnum americana, 3 to 4 ft.	40.00
100 Berberis koreana, 2 to 2 1/2 ft.	30.00	500 Lonicera tatarica alba, 2 to 3 ft.	20.00	200 Viburnum dentatum, 18 to 24 ins.	15.00
200 Berberis mentorensis, 2 1/2 to 3 ft.	50.00	150 Lonicera tatarica rosea, 18 to 24 ins.	15.00	1500 Viburnum dentatum, 3 to 4 ft.	28.00
2500 Berberis thunbergi, 2 to 2 1/2 ft.	16.00	300 Lonicera tatarica rosea, 3 to 4 ft.	25.00	500 Viburnum dentatum, 4 to 5 ft.	35.00
2000 Berberis thunbergi, 2 1/2 to 3 ft.	20.00	200 Lonicera tatarica sibirica, 2 to 3 ft.	20.00	150 Viburnum lantana, 2 to 3 ft.	25.00
500 Berberis thunbergi atropurpurea, 2 to 2 1/2 ft.	25.00	200 Lonicera tatarica sibirica, 3 to 4 ft.	25.00	200 Viburnum lentago, 2 to 3 ft.	30.00
100 Berberis thunbergi atropurpurea, 2 1/2 to 3 ft.	30.00	600 Lonicera tatarica zabeli, light, 2 to 3 ft.	15.00	300 Viburnum lentago, 3 to 4 ft.	35.00
100 Berberis thunbergi erecta, 15 to 18 ins.	20.00	1000 Lonicera tatarica zabeli, regular, 2 to 3 ft.	20.00	200 Viburnum lentago, 4 to 5 ft.	40.00
500 Cornus alba, 4 to 5 ft.	30.00	400 Philadelphus coronarius aurea, 9 to 12 ins.	18.00	250 Viburnum molle, 2 to 3 ft.	25.00
200 Cornus alba, 5 to 6 ft.	35.00	300 Philadelphus lemoinei, 2 to 3 ft.	25.00	300 Viburnum opulus, 18 to 24 ins.	20.00
200 Cornus alba elegantissima, 4 to 5 ft.	40.00	200 Philadelphus lemoinei, 3 to 4 ft.	30.00	500 Viburnum opulus, 2 to 3 ft.	25.00
200 Cornus amomum, 5 to 6 ft.	35.00	150 Philadelphus virginale, 15 to 18 ins.	20.00	1000 Viburnum opulus, 3 to 4 ft.	35.00
100 Cornus sanguinea, 5 to 6 ft.	35.00	300 Philadelphus virginale, 18 to 24 ins.	25.00	200 Viburnum opulus, 4 to 5 ft.	40.00
200 Cornus stolonifera flaviramea, 2 to 3 ft.	20.00	300 Prunus tomentosum, 18 to 24 ins.	20.00	200 Viburnum opulus sterile, 18 to 24 ins.	20.00
600 Cornus stolonifera flaviramea, 3 to 4 ft.	25.00	700 Prunus tomentosum, 2 to 3 ft.	25.00	200 Viburnum opulus sterile, 2 to 3 ft.	25.00
500 Cornus stolonifera flaviramea, 4 to 5 ft.	30.00	160 Rhodotypos kerrioides, 18 to 24 ins.	20.00	1000 Viburnum opulus sterile, 3 to 4 ft.	35.00
100 Corylus americana, 2 to 3 ft.	25.00	500 Rhodotypos kerrioides, 2 to 3 ft.	28.00	400 Viburnum opulus sterile, 4 to 5 ft.	40.00
200 Corylus americana, 3 to 4 ft.	30.00	500 Rhodotypos kerrioides, 3 to 4 ft.	35.00	200 Weigela hendersoni, 18 to 24 ins.	12.50
100 Corylus americana, 4 to 5 ft.	40.00	500 Rhus cotinus, 2 to 3 ft.	35.00		
200 Cotoneaster acutifolia, 18 to 24 ins.	15.00	300 Rhus cotinus, 3 to 4 ft.	45.00		
400 Cotoneaster acutifolia, 2 to 3 ft.	18.00	500 Rhus cotinus, 4 to 5 ft.	55.00		
700 Cotoneaster acutifolia, 3 to 4 ft.	22.00	300 Spiraea Anthony Waterer, 9 to 12 ins.	10.00		
100 Cotoneaster acutifolia, 4 to 5 ft.	30.00	400 Spiraea Anthony Waterer, 12 to 15 ins.	12.50		
200 Cotoneaster divaricata, 2 to 3 ft.	40.00	130 Spiraea arguta, 18 to 24 ins.	15.00		
200 Cotoneaster divaricata, 3 to 4 ft.	50.00	200 Spiraea arguta, 2 to 3 ft.	20.00		
400 Cydonia japonica, 12 to 15 ins.	12.00	200 Spiraea arguta, 3 to 4 ft.	25.00		
500 Cydonia japonica, 15 to 18 ins.	15.00	300 Spiraea billiardi, 18 to 24 ins.	14.00		
1000 Cydonia japonica, 18 to 24 ins.	20.00	800 Spiraea billiardi, 2 to 3 ft.	18.00		
500 Cydonia japonica, 2 to 3 ft.	28.00	700 Spiraea froebeli, 12 to 15 ins.	10.00		
300 Cydonia maulei, 12 to 15 ins.	12.00	1000 Spiraea froebeli, 15 to 18 ins.	14.00		
300 Cydonia maulei, 15 to 18 ins.	15.00	600 Spiraea froebeli, 18 to 24 ins.	18.00		
400 Deutzia gracilis, 9 to 12 ins.	15.00	100 Spiraea thunbergi, 15 to 18 ins.	12.00		
150 Deutzia gracilis, 12 to 15 ins.	20.00	200 Spiraea thunbergi, 18 to 24 ins.	15.00		
150 Deutzia Pride of Rochester, 2 to 3 ft.	20.00	500 Spiraea vanhouttei, 2 to 3 ft.	14.00		
100 Euonymus alata compacta, 18 to 24 ins.	50.00	200 Symphoricarpos chenaulti, 2 to 3 ft.	15.00		
		1000 Symphoricarpos chenaulti, 3 to 4 ft.	20.00		

FLOWERING CRABS

	Per 100
100 Malus atrosanguinea, 5 to 6 ft.	\$65.00
100 Malus eleyi, 4 to 5 ft.	50.00
200 Malus eleyi, 6 to 8 ft.	75.00
200 Malus floribunda, 6 to 8 ft.	75.00
100 Malus gloriosa, 5 to 6 ft.	65.00
100 Malus ioensis plena, 18 to 24 ins.	20.00
300 Malus ioensis plena, 2 to 3 ft.	30.00
400 Malus ioensis plena, 3 to 4 ft.	40.00
100 Malus ioensis plena, 4 to 5 ft.	50.00
300 Malus niedzwetskyana, 4 to 5 ft.	50.00
200 Malus niedzwetskyana, 5 to 6 ft.	65.00
200 Malus scheideckeri, 5 to 6 ft.	65.00

VINES

	Per 100
900 Celastrus orbiculata, No. 1.	\$15.00
160 Celastrus orbiculata, No. 2.	8.50
800 Lonicera japonica halliana, No. 1.	10.00
200 Lonicera japonica halliana, No. 1 1/2.	8.00

I. E. ILGENFRITZ' SONS CO. MONROE, MICH.

ing age have disappeared, each one in itself a liability to its owner, but collectively resulting in a considerable quantity of fruit that found its way to the market.

Bearing orchards of today, because of decreasing replacements in the past twenty years, are older and less productive than they were twenty years ago. Control of insects and other pests on these older orchards becomes increasingly difficult, resulting in increased expense to the operator and reducing his chances of a profitable margin.

Because of the infestation of codling moth that has been built up in some of these older orchards, it is no longer economical to produce fruit in certain local areas, and a shift from this area to other new areas is anticipated. Several state extension services have under way an orchard management project calling for the replacement of apple orchards after thirty years and correspondingly shorter periods for peach orchards. In the southeast, the nematode problem is holding back peach expansion, and it is indicated that, if additional supplies of peach varieties were available on nematode-resistant stock, expansion would result.

In the recent past, prices for fruit have been satisfactory, stimulating a desire to replace older plantations and to expand holdings. However, other limiting factors of a temporary nature are preventing the consummation of the desire. We have a severe labor shortage. Wages are inflated beyond the believed capacity of the operator to pay. A severe shortage of nursery stock is evident, and prices for that available are responding to the irrefutable law of supply and demand. Ceiling prices on the finished fruit act as a damper to the orchardist now, in view of real and anticipated increases in cost of production and distribution.

In general, I am convinced that the desire to replace and expand fruit production investments has been already created, and without the limiting factors just mentioned, it would progress rapidly in 1944. It will not and cannot expand to any appreciable degree in 1944 because of these factors.

However, we are looking toward the day when these limiting factors will be alleviated if not entirely eliminated. What then? Will this desire among fruit producers still remain? Or will there by that time be other factors in the picture which will tend to change the foreground of our painting? It is a fact that the background of a much-reduced bear-

ing acreage of fruit crops nationally cannot be altered. Only the foreground can be repainted.

One of the most important foreground aspects retarding expansion in 1944 is a labor shortage. This limiting factor will disappear in the postwar painting. In fact, it is becoming increasingly evident that an unemployment problem will be with us before the sun sets on the year 1944. With cutbacks and shifts in government contracts already under way, the labor situation in many areas is not so critical as formerly. We can disregard safely this factor as being limiting after peace comes.

Wages will be eliminated as a limiting factor at the same time. We should never return and probably never can return to the low level of agricultural wages paid during the 30's. However, the orchardist will not be competing with mechanized industry at inflated wage scales.

Ceiling prices on fruit are at present exerting a dampening influence on the thinking of the orchardist, but OPA is, we hope, a war emergency agency, and it will be if we do not lose democracy as we win the peace.

Prices of stock will be governed by the law of supply and demand. With present prices for planting stock, expansion of propagating programs of our many nurseries will inevitably result. With increased supply will come decreased prices. But, again, we should not, and probably never will in this generation, sell fruit stock at depression prices. We cannot, on account of our own in-

creased costs of labor, supplies and overhead. The price of planting stock will be within the reach of the commercial orchardist.

Consequently, we have fairly eliminated the present deterring factors. What new factors good or bad can we predict?

(1) We can safely predict a return for many years of our former export markets. We can predict with a fair degree of safety an increased demand for fruit from foreign lands. We know for a fact that the orchards of southern Russia have been all but destroyed with the ebb and flow of vast mechanized armies. We know that the understock situation in the British Isles is in a depleted state. These situations that we know of in these two lands undoubtedly exist in other lands where war has taken its inevitable toll. The A. A. N. office is cooperating with the British Food Administration at Washington and the Russian Rehabilitation Committee at New York on the problem of getting fruit production established again in those countries. It is likely that not only the finished product, but also the raw materials in the form of 2-year-old trees will be needed. Canada right now needs fruit stock.

This war has seen a tremendously increased attention in this country, and I assume abroad, to the place of fruit in the diet. Fruit-eating habits are being formed which will be lasting. Our domestic per capita consumption of fruits will increase commensurate with our supply. Hun-

LINING-OUT EVERGREENS

	Per 100	Per 1000
Mugho Pine, 2 to 4 ins.	\$4.00	\$30.00
Mugho Pine, 4 to 6 ins.	6.00	50.00
Mugho Pine, 6 to 8 ins.	7.00	60.00
Austrian Pine, 4 to 6 ins.	4.00	35.00
Austrian Pine, 6 to 8 ins.	5.00	42.00
Scotch Pine, 2 to 4 ins.	2.00	15.00
Scotch Pine, 4 to 6 ins.	3.50	25.00
Douglas Fir, 2 to 4 ins.	2.00	15.00
Douglas Fir, 4 to 6 ins.	2.50	20.00
Black Hill Spruce, 2 to 4 ins.	2.50	20.00
Black Hill Spruce, 4 to 6 ins.	4.00	35.00
Black Hill Spruce, 6 to 8 ins.	5.00	42.00

HOLTON & HUNKEL CO. NURSERYMEN

P. O. Box 1747

Milwaukee 1, Wisconsin

HARRISON-GROWN HIGH QUALITY APPLE TREES

Budded — True to Name

We will need a very large percentage of Harrison-grown Apple trees for our Spring 1944 retail orders for commercial orchardists and Victory Gardeners.

We have several thousand apple trees to offer to our fellow nurserymen at Wholesale prices of the following varieties:

BRIGHT RED JONATHAN

Close
Cortland
Double Red Baldwin
Early McIntosh
Early Red Duchess
Gallia Beauty
Hyslop Crab
JONATHAN
LARGE TRANSPARENT (Lodi)

Lobo

McINTOSH RED
Milton
Macoun
Red Gravenstein
RED SPY
Rhode Island Greening
RED ROME BEAUTY
Stayman Winesap
SCARLET RED STAYMAN

SOLID RED WINESAP

SUPER RED McINTOSH
Turley
Transcendent Crab
Twenty Ounce
TRIPLE RED DELICIOUS
Wealthy
Young America Crab
YELLOW TRANSPARENT
YELLOW DELICIOUS

2-year, budded, 6 to 7 feet, $\frac{3}{8}$ to 1-inch caliper.
2-year, budded, 5 to 6 feet, $\frac{1}{8}$ to $\frac{3}{8}$ -inch caliper.
2-year, budded, 4 to 5 feet, $\frac{1}{8}$ to $\frac{1}{4}$ -inch caliper.
2-year, budded, 3 to 4 feet, $\frac{1}{8}$ to $\frac{1}{4}$ -inch caliper.
Most of the aforementioned Apple Trees run in the two large sizes.

We can also supply a limited quantity of Apple Trees in the JUMBO and MAMMOTH size, which will run 6 to 8 feet, 8 to 10 feet and 10 to 12 feet. These are ideal trees for Victory Gardens.

Harrison-grown SOUR CHERRY TREES

High Quality — Budded — True to Name

Can supply a few thousand MONTMORENCY and a few hundred Dyehouse, Early Richmond, English Morello and May Duke at Wholesale prices in the following sizes:

2-year, budded, 5 to 6 feet, $\frac{1}{8}$ to $\frac{3}{8}$ -inch caliper.
2-year, budded, 4 to 5 feet, $\frac{1}{8}$ to $\frac{1}{4}$ -inch caliper.
2-year, budded, 3 to 4 feet, $\frac{1}{8}$ to $\frac{1}{4}$ -inch caliper.
2-year, budded, 2 to 3 feet, $\frac{1}{8}$ to $\frac{1}{4}$ -inch caliper.

Kindly submit Want List by wire or letter, stating number of fruit trees of each variety with size or sizes desired for Wholesale quotations.

Can make immediate shipment, or whatever time you desire during Spring 1944.

Terms—Freight Draft or C.O.D. and Express C.O.D.

HARRISONS' NURSERIES

Harrison Brothers, Props.

Berlin, Maryland

G. Hale Harrison, General Manager

dreds of thousands of suburban homeowners are planting fruit trees and small fruits on their properties today as a result of the victory garden program. These suburbanites are not going to be without fruit in the future. If I have analyzed the postwar housing problem correctly, there is going to be a new crop of suburbanites in the postwar era who will need home fruit gardens.

The cannery outlets for fruit will increase. With these new food habits, the American family will demand increased packs of American fruits. Dehydration may be here to stay, resulting in another domestic and export market. The expansion of quick freezing both commercially and in community locker systems will stimulate fruit preservation. Home quick freezing units are around the corner.

In the northwest 30,000 acres of new land in one project are soon to be brought under irrigation, much of which, I am informed, will be planted to fruit, and when the

LAKE'S SHENANDOAH NURSERIES

Shenandoah 2, Iowa

*Wholesale growers of
a fine assortment of*

GENERAL NURSERY STOCK

See our 2-page advertisement in
January 1 and 15 issues for prices
on Ornamental Shrubs and
Shade Trees.

Columbia basin project is completed, twenty-five years after the peace, another 1,200,000 acres of irrigated land, some adaptable to fruit, will be available. But I think that is getting too far ahead for most of us.

Several horticulturists have made mention of the fact that the orchard holdings in their state are in the hands of the older men, with no sons coming along with an interest in orcharding or farming. This is a discouraging factor, because if true and if demand for fruit and

PREPARE FOR EXCELLENT SPRING SALES!!

FLOWERING
CRAB APPLES
(25 varieties), all sizes.

ROSE-FLOWERING
CHERRIES.

HYBRID FRENCH LILACS,
in finest assortment.

CARAGANA LORBERGI,
a remarkable new Shrub,
especially suitable to the
northern states.

PRUNUS TRILOBA,
bush and standard form.

General Line of Shrubs.

EVERGREENS,
(I.o. Taxus a specialty.)

Ask for Trade List.

THE COTTAGE GARDENS

N. I. W. Kriek, Prop.
Lansing 15, Mich.

prices remain at a high level, we probably will see bankers, lawyers, doctors and other farm-inexperienced individuals take a plunge in commercial fruit production. While this would temporarily be to the advantage of those who sell them the trees, in the long run it is to the disadvantage of all. Discarded and neglected orchards, possible temporary gluts of the market and a depressing influence for years on an otherwise normal and recurring outlet for our commodity would result.

Several state colleges, as I have indicated, are sponsoring orchard management programs for earlier replacement of orchard trees before they reach the state of submarginality—before they become a liability rather than an asset. This is certainly a forward-looking program. One state has gone so far as to promote a program through its state planning commission for a twenty per cent increase in acreage of commercial orchards immediately after the war.

The separate opinions of all thirty-six state horticulturists who responded to my plea for assistance would mean little. Suffice it here to present a brief summary by major fruits of their opinions.

(1) In thirty commercial apple-producing states an expansion of plantings was forecast in twenty, a status quo replacement schedule in six and a continued decline in four.

(2) In twenty-one commercial peach-producing states, an expansion was indicated in fifteen, a doubtful expansion in two, a status quo situation in four.

(3) Pears. From nine states, expansion of commercial plantings was forecast in four and a replacement schedule in five.

(4) Plums. Six states predict increased plantings, two a holding of the present situation.

(5) Prunes. The three northwestern prune-producing states of note—Washington, Oregon and Idaho—all forecast an expansion of commercial production.

(6) Apricots. Four states say more to be planted; two states report that they expect about the same demand for trees as prewar.

(7) Cherries. Oregon and Washington look for increased commercial plantings of the sweet cherries, Bing, Lambert and Royal Ann, for the cannery. Four other states look for an expansion of cherry holdings and three for the maintenance of the present acreage.

(8) Small fruits. Five states look

for an expansion of small fruits generally; one anticipates a reduction of acreage.

Grapes are on the increase in some states for juice and wineries, and this is expected to continue in the postwar era.

Strawberries are expected to show expanded acreage in five states which reported specifically on this crop.

Raspberries and blackberries are expected to expand in five other states primarily for local market or for cannery and commercial quick freezing.

(9) Interest was expressed by several states in expansion of commercial nut orchards. Pecans are expected to increase in three states, but to decrease in one. English walnuts and filberts are looked to for expansion in the northwest—black walnuts in the central states.

(10) Many states scattered from coast to coast took occasion to point out the increased interest, in some cases being sponsored by the state, in home fruit gardens.

W. M. PETERSON has given up the operation of the Crest Nursery, 318 South Main street, Piqua, O., on account of old age and other considerations.

MEETING OUR PROBLEMS.

[Continued from page 15.]

that confront us today as citizens and nurserymen, but I have no method to offer. I simply want to suggest that all of us take inventory of ourselves as individuals and nurserymen. We may feel that we have insurmountable problems, and I know from my own experience that doing business in wartime is not easy, but did you ever set down on a piece of paper some of the things which we have to be thankful for as nurserymen? What would one of your friends in another line of business give if he had the opportunity to determine his own prices and more or less to control his labor and wages? We can still get within reasonable limits the necessary material we require for the operation of our business. We can plan for our future profit in some measure of possible demand. We are secure in the knowledge that as merchants of horticulture we are entrenched in the hearts and minds of the people. Our products bring a curiously satisfying sense of pleasantness. We call it a sense of beauty. Just what it really is we cannot tell, but its place in the life of our times is an enormous boon. Particularly following

AS LONG AS THEY LAST!

We Offer:

Per 100
JUNIPERUS virginiana burki, 2½ to 3 ft. . . \$47.50

JUNIPERUS chinensis pyramidalis hilli,
2 to 2½ ft. 47.50

JUNIPERUS chinensis columnaris glauca,
2½ to 3 ft. 47.50

Bedded stock, bare roots.

For early spring shipment.

PAUL OFFENBERG NURSERY

Columbus 9, Ohio.

SHERWOOD'S EVERGREENS

It takes a little time to grow nursery stock and fit ornamental shrubbery for market. Are you preparing for the demand that is coming at the close of the war? Large housing projects, roadside beautification, memorials and numerous other undertakings will create a demand such as the nursery trade has seldom if ever known.

We are calling particular attention to two items from our general list as follows:

Pinus montana mughus compacta (Mugho Pine).

The name montana means pertaining to mountains. A dense, stout dwarf evergreen of unquestionable hardness. Coming from the high mountains of central Europe it has been dwarfed as trees frequently are that are storm swept for centuries along bleak coast lines or in rugged mountains, and only the hardiest and fittest survive. Such is the selected Mugho Pine, without a peer as a dwarf mountain evergreen. Mature trees reach a height of 4 to 5 feet but having a spread of 6 to 8 feet. It grows with numerous branches and can be kept sheared to small size if desired. Very dense, compact and deep green summer and winter. Our trees are grown from selected seed of the best type and are of very uniform quality. These are specimens grown for three years in the open field row.

8 to 10 inches, twice transplanted—BR.....
Per 10 Per 100
\$4.50 \$40.00

While these trees are classed as light B&B stock, they can be handled very nicely bare roots, packed in damp moss. Handled in this manner they can be shipped anywhere. Planted in the nursery row, and given proper care they will make good landscaping material in two years with minimum labor and at minimum cost. They have all been well grown on our foot hills farm. Cash with order, no packing charge.

Thuja occidentalis pyramidalis (American Pyramidal Arborvitae).

A most desirable arborvitae of narrow columnar growth, dense and compact without trimming. Very hardy and a favorite in almost any planting. Planted in groups it produces a most impressive alpine effect. In situations where effective hedges are desired requiring but little space, Pyramidal Arborvitae has no counterpart. The hedge becomes a solid wall of green from 4 to 20 feet in height and occupies no more than 2 feet in width. For hedges, trees should be planted one and one-half feet apart. No pruning is needed other than topping. A Pyramidal Arborvitae hedge requires scarcely any care. These are specimens grown for three years in the open field row.

2 to 3 feet, three times transplanted—BR.....
Per 10 Per 100
\$7.60 \$68.00

Sherwood Nursery Co.

EVERGREENS — Propagators and Growers

141 S. E. 65th Avenue • • Portland, Oregon

(Write for wholesale list for the trade only)



the horrors of war, people will more than ever be seeking the satisfying beauty of pleasant landscaping, of beautiful trees and fruitful gardens. Our business is closer to the hearts of the human race than any other.

We are one of the most fortunate of all trades in this troubled world, and I see every reason to predict a bright future with increasing opportunities for greater service.

ROSA MULTIFLORA.

Rosa multiflora is probably best known among nurserymen as a stock for hybrid tea roses rather than as an ornamental shrub. However, it has several characteristics that commend its greater use as a decorative plant.

The Japanese rose is a vigorous shrub with long drooping canes and small dull green leaflets. It is native of Japan and Korea and hardy in the region of central Ohio. One of the most showy characteristics of this plant is the many-flowered clusters of small white flowers. These are produced in June and are followed by many small bright red hips in clusters, which are attractive throughout the winter. The fruits are among the most attractive of all

TAXUS

Cuspidata, Capitata, Hicksi, Repandens, Brevifolia, Aurea. Boxwoods, Juniper Pfitzer.

Ask for price list.

Complete assortment of unusual plant material for landscape work including Pink Dogwoods, Flowering Crabs, Shrubs and Trees.

Inquiries requested.
No lining-out sizes to offer.

THE W. A. NATORP CO.
4400 Reading Road Cincinnati 29, Ohio

COLORADO BLUE SPRUCE

	Per 100	Per 1000
60,000 2-yr., S. (2-0), 1 to 4-in.	\$2.00	\$ 9.00
40,000 3-yr., S. (3-0), 2 to 6-in.	3.00	14.00
100,000 4-yr., T. close (2-2), 3 to 6-in.	5.00	24.00

These trees grown from seed from cones hand-picked from blue trees in Colorado.

NORWAY SPRUCE

	Per 100	Per 1000
30,000 4-yr., T. close (2-2), 3 to 8-in.	\$3.75	\$16.00

All Bed-run. Shipped early in April.

Price of other Spruce, Pine and Fir on request.

ALL MICHIGAN-GROWN

WALTER A. STUDLEY NURSERY, Dept. AN. Fennville, Mich.

the roses. It has been spoken of as the smallest-flowered but most abundant-flowering of all the roses.

Rosa multiflora does well in average garden soil. It does best in sun, but may be used in slight shade.

Propagation is by cuttings. Besides its use as an understock, this plant may be used effectively in masses along stream banks, in large borders or for training on wire fences.

L. C. C.

State Association Annual Meetings

GEORGIA MEETING.

The Georgia State Nurserymen's Association held its seventh annual meeting at the landscape architecture department, University of Georgia, Athens, January 10. On account of war conditions, a one-day streamlined session was arranged instead of the usual two-day program. The landscape architects and landscape contractors of Georgia were invited to this meeting, and several of them attended.

Members of the university staff provided the morning program, discussing soils, native shrubs, tree maintenance and camellia growing.

Russell Lord, editor of *The Land* magazine, addressed the group at the luncheon meeting, and C. H. Alden, state entomologist, made a practical talk at the afternoon session.

It was the consensus that this was one of the best meetings ever held by the state organization and it proved particularly worth while to have landscape architects and contractors participate in the round-table discussions.

The following officers were elected for the coming year: President, John Baird, Fort Valley; vice-president, Aubrey Owen, Gay; secretary-treasurer, Lawrence Knox, Thomson.

Hubert B. Owens.

CONNECTICUT ELECTION.

The thirty-seventh annual meeting of the Connecticut Nurserymen's Association, held at the Hotel Garde, New Haven, had favorable, spring-like weather for a change, which brought out a good attendance.

President Wellington Kennedy spoke briefly on nursery conditions in the past year and the need for postwar planning. He stressed the point that the planning should be done now and in some detail, that it took a while to work up plans for any project and when the need for plans came they would be ready. Plans can always be discarded, but cannot be worked up in detail at short notice.

After reports of committees were heard, the officers on the nominating committee's slate were elected, as follows: President, Peter J. Brouwer; vice-president, Arthur E. Webster; secretary and treasurer, Arthur C. Bird.

Dr. James G. Horsfall, Dr. Roger Friend, J. Peter Johnson and M. P. Zappe, of the Connecticut agricul-

tural experiment station, spoke briefly on items of current interest to the nurserymen.

Owen G. Wood, of the Wood-Howell Nurseries, Bristol, Va., and Howard Taylor, of Rosedale Nurseries, Eastview, N. Y., were present as guests of E. D. Robinson and were called on to speak.

The newly elected officers were installed with due ceremony by Louis Vanderbrook and carried on the meeting.

After dinner, Fred Cook, of the New Haven OPA office, outlined the work of his department and said in part, "None of us wants control, but if we don't have it then inflation will result. It boils down to the issue of a managed vs. a free economy. It is also a question whether a free people can meet this issue by subordinating our appetites to the best interests of the whole country."

The last speaker was Alec Cumming, on chrysanthemums, and his talk was illustrated with Kodachrome slides. The slides were of special interest to many who had not had the opportunity to see the fields of mums at first hand.

A. C. Bird, Sec'y.

MARYLAND MEETING.

The meeting of the Maryland Nurserymen's Association, at the Lord Baltimore hotel, Baltimore, January 12, with sixty members

attending, was called to order by E. Sam Hemming, president, who introduced Dr. T. B. Symons, dean of agriculture and extension service at the University of Maryland. Dr. Symons laid particular emphasis on the spirit of cooperation among nurserymen and introduced an excellent suggestion that the nurserymen form a cooperative for the purchase of sundry materials.

After the reading of the minutes of the previous meeting by Secretary D. B. Stoner, the morning session was largely taken up with discussion of Paul Hofmann's report of his committee on the question of uniform guarantees. After a lively discussion it was moved and passed that the association and its members adopt as their policy the following: "As the life of trees and plants after they leave our hands and care cannot be guaranteed, all claims for replacement will be adjusted, based on full information and fairness to both parties concerned."

A luncheon was served, with Henry Hohman as toastmaster. The association's distinguished member, Philip Wagner, editor of the *Baltimore Sun*, spoke first briefly on his little hobby nursery, where he is raising wine grapes that are hardy in the east, and then from his broad knowledge of the world at war on current and postwar problems.

Irving C. Root, of the National



1 MILLION AUSTRIAN PINE

3-year, 6 to 12 ins., \$15.00 per 1000

(Above special price to nurserymen only subject to change).

Finest Stock in the Country—Write Today for Complete Stock List and Special Christmas Tree Growers' Guide.

MUSSER FORESTS, INC.

Indiana, Pa.

*save the
moisture*



*and you
save the tree*

DOWAX

- ★ Retards Evaporation
- ★ Conserves Vital Moisture
- ★ Discourages Borer Attack
- ★ Eliminates Wrapping, Except on Thin Bark Varieties.

Dowax, a remarkable scientific wax emulsion, conserves the natural moisture within trees and shrubs, making it possible to transplant them at any season of the year. It can be used on trees in either the dormant or foliage stage, and one application will serve for an entire season. Write for additional information.

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DOW

*Extends the
transplant season*

DOWAX

Capital Parks, Washington, D. C., had an attentive and note-taking audience when he enumerated the plants found most satisfactory in their plantings. Some of them are sugar and red maples, horse chestnut, *Celtis sinensis*, dogwood, beech species, *Prunus yedoensis* varieties, the oaks, *Sophora japonica*, bald cypress and European linden among shade trees. The evergreens include Nordman fir, Deodara cedar, holly, *Magnolia grandiflora*, white pine and Canadian hemlock. Shrubs include abelia, aronias, aucuba, *Azalea nudiflora* and *A. viscosa*, spicebush, Chinese redbud, cotoneaster species, *Euonymus alatus*, *E. americanus* and *E. radicans coloratus*, laurel, Carolina bayberry, pyracantha, four yews and vacciniums.

R. S. Johnston read a paper for Ernest Hemming on memorial parks for the soldiers, and C. W. Price reported on the work and progress of the able A. A. N. committee on memorial parks. The subject aroused much interest, and the president suggested the incoming officers appoint a state memorial park committee.

Furthering the progress toward full unity and cooperation, Homer Kemp discussed ethical standards for the nursery business. He spoke of

HANSEN BUSH CHERRY

One of the fastest selling items for catalogue or agents, especially this year with the shortage of fruit tree stocks. A leading fruit plant and ornamental. We have a splendid lot of the Latest Improved Selections. We can supply many photos, cuts, colored prints, etc.

Size	Grade	Per 100	Per 1000
12 to 18 ins., 2-yr., branched.....		\$10.00	\$ 75.00
18 to 24 ins., 2-yr., branched.....		12.50	100.00
2 to 3 ft., 2-yr., branched.....		15.00	125.00
3 to 4 ft., 2-yr., branched.....		17.50	150.00
Super Grade, 2 to 3 ft., 3-yr., well branched..		25.00	200.00
Super Grade, 3 to 4 ft., 3-yr., well branched..		30.00	250.00

CARL A. HANSEN NURSERY

Brookings,
South Dakota

the experience of the Delmarva Nurserymen's Association and the wonderful results from getting together as a friendly group, with honest ethical relations among them.

Henry Hohman was elected delegate to the board of governors of the Farm Bureau.

The new officers elected were: President, Daniel B. Stoner, Westminster Nurseries, Westminster; first vice-president, Homer Kemp, Bountiful Ridge Nurseries, Princess Anne; second vice-president, L. H. Willis, Hyattsville Nurseries, Hyattsville; secretary, Paul Hofmann, Towson Nurseries, Inc., Towson; treasurer, Carville Akehurst, Akehurst Bros., Fullerton.

Incumbent members of the executive committee are R. S. Johnston,

The lovely

Yellow

Rose

V for Victory

and other

SUB-ZERO HYBRID TEAS

Large and beautiful as any.
Easy to grow and long to live.
Save replacement expense.

Write for trade prices to

BROWNELL ROSES
LITTLE COMPTON, R. I.



J. F. Hetzer, Paul Hofmann and Roland Bailey. New members elected are Andrew Simon, Patsy Donofrio, Joseph Harrison and E. Sam Hemming.

Discussion of the Maryland Nurserymen's Association membership as a chapter in the A. A. N. was held over until the evening session, when it was decided to have a committee go over the subject thoroughly before coming to a decision.

G. Hale Harrison took the burden of the evening discussion on wartime operations. His experience with Bahaman labor aroused the most interest. He found the Bahamians able, steady and dependable, but slow. E. Sam Hemming.

INDIANA CONFERENCE.

The third annual Purdue conference and the annual meeting of the Indiana Association of Nurserymen were held at the Hotel Antlers, Indianapolis, January 18 and 19.

The meeting was called to order by the president, Floyd Bass, promptly at 10 a. m. Invocation was given by the Rev. E. W. Nugent.

Starting the Purdue conference, Prof. J. A. McClintock gave an up-to-the-minute report on virus diseases pertaining to all nursery stock for cuttings. Because these virus diseases are so new, little authentic material is available, but Professor McClintock gave the members many things to think about.

Prof. O. C. Lee spoke on bindweed. He discussed the different forms—morning-glory, perennial morning-glory and Japanese vine. Continued cultivating for three years or use of sodium chloride, five pounds to the square yard, seems to be a cure. Other weeds and their extermination were discussed in detail.

After lunch, Dr. C. T. Gregory discussed new fungicides. Some of the chemicals mentioned are so new that much about their practical application could not be given. However, they show progress along this line. The new products, Fermate, Arsan, Thiosan and Spargon, were all discussed.

Dr. G. D. Scarseth, with his individual style of delivery and storehouse of knowledge, which he so characteristically imparts to his audience, left everyone on the edge of his seat. He is truly an expert in his line and gave everyone a better idea of "What Makes Soil Fertile." Concrete experiences are always convincing, and he has plenty of them.

In the evening, Herman Wiegand arranged a fine banquet and enter-

tainment, which were enjoyed by all.

Next day, January 19, President Bass made some timely remarks as to postwar conditions which must be met by our association.

The new park board superintendent, Paul V. Brown, gave a talk about Indianapolis city parks.

One of the most instructive talks ever heard by the association was delivered by Richard P. White, executive secretary of the American Association of Nurserymen. He really knows the answers to our problems. We were indebted to Mr. White for an instructive two hours.

The question box conducted by Ollie Hobbs was as good as ever, and much information worth while came out of this period. Associate and honorary members made some timely remarks.

The business meeting followed, with election of officers as follows: President, Floyd Bass; vice-president, Homer Wiegand; secretary-treasurer, Mary L. Stum. A. W. Fox, Elkhart, and Devol Ernst, Muncie, were added to the executive committee.

Mary L. Stum, Sec'y.

NEBRASKA MEETING.

The annual winter meeting of the Nebraska Association of Nurserymen was held at the Hotel Cornhusker, Lincoln, January 12, with twenty-two nurserymen present. Lloyd Moffet, reporting for the membership committee, recommended a new nursery for membership. The other committees had nothing of importance to report. The uniform guarantee committee was con-

AMERICAN NURSERYMAN

tinued for another year in the hope that something could be worked out along this line.

In behalf of Plumfield Nurseries, Lloyd Moffet invited the organization to Fremont for the summer or fall field meeting. This matter was left to the decision of the executive committee members, who are to determine as to the advisability of such a meeting later in the year.

The following officers were unanimously elected: President, Russell Davidson, Hastings; vice-president, Gus Gritzmacher, Fremont; secretary-treasurer, Harvey Williams, Lincoln.

The members voted to purchase additional war bonds.

Lloyd Moffet, of Plumfield Nurseries, and Don Moffet, of Mount Arbor Nurseries, discussed the business outlook from the viewpoint of the wholesale grower. E. H. Smith, of Harrison Nursery Co., York, was called on to forecast the future from the standpoint of a retail nurseryman. Chet Marshall, Arlington, spoke on the subject of breaking into the mail-order line. All agreed that most nurseries will have all the business the coming spring that they can care for, that most kinds of ornamentals are in good supply, but that practically all fruit stocks are scarce and will move at good prices.

Twenty-two nurserymen and ten guests were present at the noon luncheon, with Chet Marshall again acting as master of ceremonies. Dr. H. D. Tate, chairman of the department of entomology of the University of Nebraska, spoke on the subject of opening a new front in the

GUARANTEED-TO-LIVE EVERGREENS AT LOW PRICES!

American Arborvitae		Per 1000
3-yr. Transplants (2-1), 2 to 4 ins.		\$15.00
5-yr. Transplants (2-3), 5 to 10 ins.		20.00
Mugho Pine		
4-yr. Transplants (2-2), 5 to 10 ins.		25.00
Norway Red Pine		
4-yr. Transplants (2-2), 6 to 12 ins.		18.00
5-yr. Transplants (2-3), 10 to 18 ins.		20.00
White Pine		
2-yr. Transplants (2-1), 3 to 6 ins.		20.00
4-yr. Transplants (2-2), 6 to 12 ins.		25.00
5-yr. Transplants (2-3), 8 to 15 ins.		28.00

TERMS
Cash with order, or half cash with order, balance C. O. D. Fryeburg, Maine, net, no discounts. No less than 250 trees of one kind and size at 1000 rate. No charge for boxes or packing.
All orders shipped express collect unless otherwise specified. Trees shipped by freight not guaranteed to live.

Colorado Blue Spruce		Per 1000
4-yr. Transplants (2-2), 4 to 8 ins.		\$40.00
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Engelmann Spruce		
3-yr. Transplants (2-1), 2 to 5 ins.		20.00
5-yr. Transplants (2-3), 5 to 10 ins.		25.00
Norway Spruce		
4-yr. Transplants (2-2), 5 to 10 ins.		22.00
White Spruce		
5-yr. Transplants (2-3), 8 to 15 ins.		25.00

GUARANTEE
90 per cent of each order guaranteed to live—unless shipped by freight. Free replacements up to 90 per cent before October 1, 1944.
(2-1) means 2 years as seedling, 1 year in transplant bed. Similarly for other figures in parentheses.

Prices Just as Low on Other Sizes and Varieties.
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WANT LIST

We require the varieties listed below—all strong lining-out sizes. If you can furnish all or part, please quote prices and sizes.

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<i>Acanthopanax pentaphyllum</i>	100
<i>Acer glinnala</i>	100
<i>Althaea DBL pink</i>	50
<i>Althaea DBL white</i>	50
<i>Althaea DBL red</i>	50
<i>Aronia, brilliant</i>	250
<i>Benzoin aestivale</i>	50
<i>Berberis thunbergii</i>	1000
<i>Berberis mentorensis</i>	100
<i>Calycanthus floridus</i>	100
<i>Cercis canadensis</i>	150
<i>Chionanthus virginicus</i>	100
<i>Cladrastis lutea</i>	50
<i>Clethra alnifolia</i>	50
<i>Cornus florida</i>	250
<i>Cornus mas</i>	50
<i>Cornus paniculata</i>	100
<i>Corylus americana</i>	100
<i>Cotoneaster acutifolia</i>	100
<i>Cotoneaster divaricata</i>	250
<i>Deutzia gracilis</i>	100
<i>Elaeagnus angustifolia</i>	50
<i>Eunymus alatus</i>	200
<i>Eunymus alatus compacta</i>	100
<i>Foraythia intermedia spectabilis</i>	250
<i>Foraythia suspensa</i>	100
<i>Halesia tetraptera</i>	50
<i>Hamamelis virginiana</i>	100
<i>Hydrangea arborescens</i>	250
<i>Hydrangea quercifolia</i>	100
<i>Ilex verticillata</i>	100
<i>Itea virginica</i>	50
<i>Ligustrum vulgaris</i>	100
<i>Ligustrum regela</i>	500
<i>Ligustrum Amur River South</i>	250
<i>Lonicera korolkowi floribunda</i>	100
<i>Lonicera maackii podocarpa</i>	100
<i>Lonicera morrowi</i>	100
<i>Lonicera tatarica, Imp. Red</i>	200
<i>Kerria japonica</i>	100
<i>Koeleria</i>	50
<i>Kolkwitzia amabilis</i>	250
<i>Malus ioensis plena</i>	100
<i>Myrica carolinensis</i>	100
<i>Philadelphus Bouquet Blanc</i>	100
<i>Philadelphus grandiflorus</i>	100
<i>Philadelphus virginialis</i>	100
<i>Philadelphus lemoinei</i>	100
<i>Photinia villosa</i>	100
<i>Physocarpus monogynus</i>	100
<i>Rhamnus frangula</i>	100
<i>Rhodotypos kerrioides</i>	100
<i>Rhus canadensis</i>	100
<i>Rhus copallina</i>	100
<i>Rhus cotinus</i>	50
<i>Ribes alpinum</i>	100
<i>Spiraea Anthony Waterer</i>	250
<i>Spiraea billardii</i>	100
<i>Spiraea prunifolia</i>	250
<i>Spiraea thunbergii</i>	100
<i>Spiraea vanhouttei</i>	250
<i>Stephanandra flexuosa</i>	100
<i>Syringa japonica</i>	100
<i>Syringa persica</i>	250
<i>Syringa vulgaris, White</i>	250
<i>Syringa vulgaris, Purple, Select</i>	500
<i>Viburnum americanum</i>	250
<i>Viburnum burkwoodii</i>	250
<i>Viburnum carlesii</i>	250
<i>Viburnum dentatum</i>	250
<i>Viburnum lentago</i>	250
<i>Viburnum prunifolium</i>	100
<i>Viburnum sieboldii</i>	100
<i>Viburnum tomentosum plicatum</i>	100
<i>Vitex macrophylla</i>	50
<i>Weigela roseana</i>	250
<i>Weigela Eva Rathke</i>	100
<i>Clematis paniculata, 2-yr. No. 1</i>	50

The W. A. Natorp Co.

4400 Reading Road
Cincinnati 29, Ohio

insect war. Dr. Tate had with him one of the new devices which was later described in the newspapers as an insect bomb. This bomb is being used by our armed forces at present to kill mosquitoes and other insects in the battle areas. Officially this is known as an aerosol bomb and is about the size of a pint fruit jar. The insecticide is pyrethrum dissolved in Freon, with a small quantity of sesame oil as an activator. The Freon, being loaded in the bomb in the liquid state, builds up a pressure of about ninety pounds when released into the atmosphere. This device is thought to have considerable possibilities for household and greenhouse use following the war. At present the entire output is being absorbed by our armed services.

Jess Livingston, of the department of plant pathology, spoke on "What's New in Plant Pathology." He mentioned some of the newer fungicides and discussed their uses in fields of interest to the nurseryman. Prof. E. H. Hoppert discussed "Plans for the 1944 Victory Garden Program." He said that demand for food this year will be greater than ever, and plans are for a ten per cent increase in the number of victory gardens, with a total of 22,000,000 gardens for the nation as a whole. He mentioned the unfavorable outlook at the present time, due to extremely dry conditions. Apparently the gardener has one strike against him before the season starts.

Dr. Leo Christensen, director of the chemurgy program in Nebraska, discussed this project and mentioned the number of crops that might be grown by nurserymen at a profit and that would fit into the chemurgy program. Dr. Carl E. Claassen, assistant to Dr. Christensen, discussed culture methods. Dr. Christensen stated that the new Omaha alcohol factory, now almost ready to start production, is the second largest such factory in the world. When in full production, it will take 10,000 persons working on the farms to produce the corn, wheat and other grains to keep it in operation. Many of the nurserymen present caught the enthusiasm of Dr. Christensen when he forecast the possibilities and the big things definitely in sight for this territory in the field of chemurgy.

Harvey Williams, Sec'y.

CLEAN up before the spring rush and turn in that rusty unused equipment and broken parts for scrap iron. It is still needed for the war production of steel.

DOUBLE VALUE IN Planet Jr.!



Growers of all kinds find that they can do more work—and do it better—with Planet Jr. Garden Tractors and Planet Jr. specialized Seeding, Fertilizing, and Tillage tools. Planet Jr. multiplies their manpower!

Planet Jr. not only offers a solution to many of your own production problems but, in addition, offers a real sales opportunity among your customers—an opportunity too good to be missed!

Although quotas are restricted, we suggest you write for full information and the Planet Jr. Tractor and Planet Jr. Implement catalogs.

S. L. ALLEN & CO., INC.
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75 years making growers' work easier

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This Business of Ours

Reflections on the Progress and Problems of Nurserymen

By Ernest Hemming

PLANT LIFE.

One would think that anyone who had anything at all to do with the handling of plants would be familiar with the one essential necessary to keep them in good condition while out of the ground, that the roots be kept moist and be prevented from drying out. Yet how often does this essential seem to be completely ignored! It is difficult at times to know if it is ignorance or just carelessness.

The most charitable explanation is that the persons responsible have not been taught by experience that as soon as a plant is taken out of the soil and exposed to the air it begins to shrivel and the plant dies unless means are taken to prevent it. With young delicate plants, depending on exposure, this may be a brief period; with woody plants the period may be longer, but the good plantsman aims to prevent all needless exposure of the roots to dry air, sun and wind. E. H.

A PLANT GAME.

Watching my young grandchildren doing their home lessons, I cannot help being impressed by the improved methods in education. By these methods, the youngsters seem to play games, in contrast with the procedure of my own school days. This thought brought to mind a game rather popular in my apprenticeship days (and in my own case proved of great assistance in my horticultural education) that might become popular here among college students, garden clubs and other persons interested in plants. In those days legs were our only means of transportation; so we had to stay put, as it were, and furnish our own amusement. The game of "What is it?" consisted of a bunch of us boys going for walks in the long summer evenings and challenging one another's knowledge of plants anywhere and everywhere, along the lanes, in the woods and fields, or in the nursery of Dixons', Ltd., where we were all working. It took in all plants, weeds and cultivated ones.

Of course, the game required getting acquainted with the plants yourself before challenging the other fellow. As I recall, some of the rules were: Only Latin names counted.

The challenger must know what the plant was before he asked the other fellow; if it proved he did not, he was penalized two points. The game was complete in one stroll. If the challenged named the plant correctly, he was given one point. The challenger was given two points for every plant the challenged could not name. Of course, the game led to many arguments as to identity, but, as I recall it, the game was extremely educational, much more than poring over a botany book or nursery catalogue.

A knowledge of plants is one of the most valuable assets a nurseryman can have, especially in selling. It is an open sesame to customers, especially the ladies, and they do most of the buying anyhow. Such knowledge includes not only the nurseryman's own plants, but the weeds and wild plants, too. E. H.

AMONG officers elected at the latest annual meeting of the South Dakota Horticultural Society, chosen vice-president and treasurer respectively, were George W. Gurney, president of the Gurney Seed & Nursery Co., Yankton, and H. N. Dybvig, proprietor of Dybvig's Nurseries, Inc., Colton.

LINING-OUT STOCK

Grown right. Handled right.
Packed right.
All two and mostly three times transplanted.

	Each, in	Each, in
	100 lots	1000 lots
Juniper Pfitzer.	12c	10c
5 to 8 ins.	12c	10c
8 to 12 ins.	16c	14½c
Jun. Pfitz. Aureo Hilli	10c	
4 to 6 ins.	10c	
5 to 8 ins.	12c	
8 to 12 ins.	16c	
12 to 16 ins.	18c	

AUGUSTINE NURSERIES
NORMAL, ILL.

HEMLOCK

Rhododendrons
Kalmia — Azaleas

Write for our list

CURTIS NURSERIES

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New York

TWIN CITIES MEETING.

Members of the Twin Cities Nurserymen's Association held their monthly meeting at the Y.M.C.A. building, St. Paul, Minn., January 19, with Morton Arneson, president, in the chair. Because the recently elected secretary declined to serve in that position, a nominating committee reported unanimously in favor of requesting John Nelson, of R. L. Gould & Co., St. Paul, to continue holding office as secretary for another year. Mr. Nelson agreed to do this.

H. J. Reid, of the landscape department of Holm & Olson, Inc., St. Paul, and Gordon Bailey, of the J. V. Bailey Nurseries, Newport, gave brief reports of the recent nurserymen's convention at Chicago. A general discussion of various post-war planning proposals of interest to nurserymen followed. There did not appear to be an overenthusiastic spirit of optimism about reports of a big influx of business at the conclusion of the war. In order to obtain a concrete idea of what the nurserymen present were preparing to do to meet the anticipated rush of landscape orders, one member asked for replies to this one question, "What are you doing or planning to do in regard to propagating

?

Who offers the nursery trade of this country the greatest line of rare trees and shrubs?

What is the only wholesale nursery list that shows the hardiness of each item?

Write for list 4344 and find out! But use your business stationery, as postcards will be ignored.

W. B. CLARKE & CO.
San Jose 2, Calif.

See our half-page advertisement of

Juniper Glauca Hetzi
New Spreading Evergreen

in January 15 issue.

FAIRVIEW EVERGREEN
NURSERIES
Fairview, Pa.

BOBBINK & ATKINS*Nurserymen and Florists***America's Leading Specialists in:—****Deciduous Azaleas**

including the best named varieties of Mollis, Pontica and Rustica

Hybrid Rhododendrons

20 leading varieties

Dogwoods—Pink and white**Ginkgos and Lindens****Vines**

Headquarters for English Ivy

Perennials and Roses

in varieties not obtainable elsewhere

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BARBERRY**PRIVET**

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HEDGE PLANTS

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Evergreens**Barberry****Privet**

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GARDNER'S NURSERIES

Rocky Hill, Conn.

BURR

Leading wholesale source for Nursery Stock.

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Manchester, Conn.

PRINCETON NURSERIES

of PRINCETON, N. J.

SUPERIOR**Hardy Ornamentals****KOSTER NURSERY**

Azaleas, Rhododendrons, Taxus, Junipers, Lilacs, Maples, Dogwood and other items in lining-out and smaller specimen sizes. For complete line look up your February 15 or March 1, 1943, issue.

SEABROOK FARMS

Bridgeton, N. J.

Ask for our latest price list.

plant material?" Practically all the answers given were to the effect that no heavy propagating program was being contemplated.

Edward Johnson, landscape architect for the Rose Hill Nursery, St. Paul, gave a well prepared talk on the nation's money and how it functions. Mr. Johnson stated that, having been impressed with his lack of knowledge of the inner workings of the monetary system, he had enrolled as a student in banking and money courses at the University of Minnesota. He showed graphs illustrating various points in his talk.

MEET AT RALEIGH, N. C.

S. D. Tankard, of Hickory, was elected president of the North Carolina Association of Nurserymen at the closing session, January 20, of its two-day annual meeting at North Carolina State College, Raleigh.

James Ferger, of Wilmington, was elected vice-president, and L. G. McLean, of State College, was reelected secretary-treasurer. W. C. Daniels, of Charlotte, was named by President Tankard to serve as a member of the executive committee from the state at large.

Frank S. LaBar, president of the American Association of Nurserymen, was the featured speaker at the banquet on the preceding evening. He was warmly welcomed, and his remarks on the progress of the association in recent years and its aims for the future impressed the North Carolina nurserymen.

Earlier that day Walter Campbell, Greensboro, commented on current problems in his address as president. M. L. Harkey, Charlotte, discussed nursery labor problems, and S. D. Tankard, government contracts and postwar possibilities.

C. H. Brannon, Raleigh, reported on his work as state nursery inspector.

On the second day, M. E. Gardner, head of the horticultural department at North Carolina State College, discussed new developments in horticulture. L. R. Casey, Goldsboro, had for his subject, "Supplementing Nursery Activities," and on hand were college men to answer technical questions on poultry, animal husbandry and field crops.

Other speakers were James Ferger, Wilmington, on new hardy camellias; Jack Lindley, Greensboro, on storage and packing of nursery stock; Harry Nettles, Asheville, on future personnel for the nurseryman, and Dr. L. G. McLean, on cash crop and nursery production.

PLANT NOW**and keep up your stock.****You will probably be too busy next spring.****SEEDLINGS**

	100	1000
Abies concolor, 4 to 6 ins.....	\$4.00	.....
Abies fraseri, 4 to 6 ins.....	3.00	\$25.00
Picea canadensis, 4 to 6 ins.....	3.00	25.00
Picea excelsa, 6 to 8 ins.....	4.00	35.00
Picea excelsa, 6 to 8 ins., tr.	6.00	50.00
Picea glauca albertiana,		
3 to 4 ins.....	3.00	25.00
Picea pungens glauca,		
6 to 8 ins.....	3.00	25.00
Picea pungens glauca,		
8 to 10 ins., tr.....	10.00	90.00
Pinus mughus, 4 to 8 ins.....	5.00	40.00
Pinus nigra (austriaca),		
8 to 10 ins.....	4.00	35.00
Pseudotsuga douglasii,		
6 to 8 ins.....	3.00	25.00
Syringa vulgaris,		
10 to 15 ins.....	4.00	35.00
Thuja occidentalis,		
6 to 8 ins., tr.....	6.00	50.00
Thuja orientalis,		
10 to 12 ins., tr.....	6.00	50.00
Tsuga caroliniana, 3 to 4 ins.	4.00	35.00

CUTTINGS

From 2½-inch pots.

\$12.00 per 100, 500 or over at \$10.00 per 100.

Ilex crenata bullata.
 Juniperus depressa plumosa.
 Juniperus horizontalis Bar Harbor.
 Juniperus hibernica.
 Juniperus excelsa stricta.
 Juniperus pfitzeriana.
 Juniperus sabina.
 Retinospora plumosa aurea.
 Taxus cuspidata.
 Taxus cuspidata nana.
 Taxus intermedia.
 Taxus media hicksi.
 Taxus cliftoni.
 Taxus repandens.
 Thuja occidentalis compacta.
 Thuja globosa.

GRAFTS

1-year from 2½-inch pots.	10	100
Cornus florida rubra.....	\$3.50	\$32.50
Juniperus columnaris glauca.	3.50	32.50
Juniperus chinensis		
neoboriensis.....	3.50	32.50
Juniperus squamata meyeri.	3.50	32.50
Juniperus virginiana burki...	3.50	32.50
Juniperus virginiana canaerti.	3.50	32.50
Juniperus virginiana glauca...	3.50	32.50
Juniperus virginiana		
keteleeri.....	3.50	32.50
Juniperus virginiana		
kosteriana.....	3.50	32.50
Juniperus virginiana schotti.	3.50	32.50
Juniperus virginiana		
pyramidiformis.....	3.50	32.50
Thuja orientalis aurea nana.	2.75	25.00

HESS' NURSERIES

Mountain View, N. J.

Some Southwestern Natives

By C. W. Wood

Although not hardy here in north Michigan, if brought in from the southern part of its range, *Atriplex canescens* should be useful farther south as a background plant or even as a specimen. I cannot tell from experience how tall it would become if it did not freeze back, and the books consulted did not say, but I suspect from its behavior that it probably would attain a stature of four feet. Typical *atriplex* shrubby growth to that height, clothed in pretty gray-green leaves, and the ability to get along on little moisture should make it valuable. All *atriplex* varieties that I know come readily from seeds and many of them from cuttings.

It had been several years since I had seen the rouge plant, *Rivina humilis*, when seeds arrived two or three years ago from a Texas correspondent. Years ago we had it in the window garden and later in the greenhouse, but did not think of it as an outdoor plant. This time we tried it in the open, where it did well until last winter, when we forgot to mulch it. It is surprising, though, the amount of cold the plant can stand. On that basis, I recommend it for trial far north of its range. It will not be the evergreen pokeweed it is in southern Florida and southern Texas, of course, but it should make 2-foot growths, clothed in heart-shaped leaves, and bear clusters of small white flowers, followed by showy, bright red berries.

I wish I knew how far north a plant I had a few years ago under label of *Acleisanthe longiflora* could be grown safely, for it was a most spectacular vine. As I remember it now, it reminded me of a trailing *datura*, though it is said to belong to the four-o'clock family. It has the long-tubed (six inches or more) white flowers, delightful fragrance and long blooming habit of *Datura suaveolens* and about the same degree of hardiness, according to experience here. Neither is reliable here, though both will go through a normal winter under a heavy mulch. *A. longiflora* is a plant of much promise for sections not too cold for its constitution.

There are said to be about fifteen species of *talinum*s. I must have grown almost that many, and I know that I have not had all the tropical ones. Be that as it may,

our southwest has two or three kinds now seldom grown which should be in gardens, even if it is necessary to grow them in pots, as I have *T. aurantiacum* and *T. paniculatum*. The first of these is unique in *talinum*s, as far as I know the genus, because of its yellow flowers in a race which generally is pink or red, rarely white, flowered. The flowers are also large (to an inch in diameter) for a *talinum*. As *T. aurantiacum* grew here in pots, it became about fifteen inches tall and bloomed during summer, opening its flowers in the afternoon and closing them the next morning. The other, *T. paniculatum*, runs more according to family tradition, producing its small pink flowers in panicles (hence the common name of pink baby's breath) from June until autumn. It is said to grow under trees in its native habitat, though it did well here in a sunny window. I never tried the plants outdoors, so cannot report on their hardiness. Judging from the behavior of other plants from that section and the thickened rootstock of *talinum*s, which could be planted four or five inches deep and mulched, if necessary, I should expect the plants to be reliable as far north as St. Louis and perhaps farther.

This one is what a street faker

would call a come-on. I know nothing about the plant, *Aquilegia phoenicantha*, except what I have read, and insert this paragraph with the hope that some nurseryman visiting the canyons in southwestern Texas will bring this *aquilegia* back with him and make it available to the trade. Few persons in Texas seem to know a thing about the plant, and a search made by the writer covering twenty years has been fruitless; even so, it took that long to find *A. longissima*; so the inquiry may eventually succeed. *A. phoenicantha* is said to be low-growing and to be an especially lovely red columbine.

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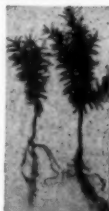
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I sometimes wish I lived in the south so I could enjoy the acacias, and then I content myself by growing or trying to grow the hardier kinds. Among the latter which have given me pleasure is one received as *A. angustissima*. The books say it is a shrub to three or four feet; here it grew about two feet tall, killing back to the ground every winter, but blooming from midsummer to late summer onward, with pretty, pure white acacia flowers. This is a desirable plant, in my opinion, wherever hardy. Like most acacias, it is easy to produce from seeds, blooming the second year, or at least it did here. There is a wealth of good material in acacias, most of it seldom seen, even in southern gardens.

Two baptisias, *B. leucantha* and *B. leucophaea*, of the middle west also extend into the section which we are considering, giving them a place in our notes. I have not tried material of either species from the southwest, so do not know how they would react to our northern conditions, but as both kinds are native to this state (Michigan), they should be able to stand the winters anywhere in the country. Both are desirable garden plants, with pretty legume foliage and flowers creamy-white in the first and creamy-yellow to white in the second. *Leucantha*, with its height of three or four feet and long spires of lupine-like flowers, is a splendid background plant and the other, with lower habit (almost trailing at times), is suited to the front of the border or as a covering for banks. Both come readily from fall-sown seeds.

I had once from a man long since gathered to his fathers a curious and beautiful little legume, *Cassia pumilio*. Since losing it for some reason (perhaps extreme cold), I have been unable to find another source. That is not as it should be, for the plant holds definite promise of becoming a popular rock garden subject, especially in hot dry sections, where many choice rockery plants are almost impossible. I am not sure, either, that cold took it away, because the deep-seated tubers (eight inches) were planted in a spot where snow covered them early and late; certainly drought could not affect the plant, for the tuber seems to be able to store moisture and vitality, or both, to carry it through near-desert conditions. The plant is curious with its two longish leaves and short stems, bearing black-spotted, yellow, cassia flowers, large (a half inch or more across) for the size of the plant. The plant comes

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easily from seeds and should become popular if someone in Texas or western Oklahoma will look it up and make seeds available. I have also had from that section, and found it wanting in hardiness, another cassia, *C. roemeriana*, which should be useful, because of a summer-long production of golden-yellow legume flowers, in sections farther south. It grows about a foot tall (said to be almost twice that in nature) and makes a lovely little bush. Several other cassias are mentioned in the floras of that section, some of which would no doubt be useful if we could get them.

The prairie clovers (*dalea*) are not a spectacular lot, though I suspect they contain more good garden material among the hardy members of the genus than is generally supposed. Some of the southwestern species, especially the shrubby ones, that I have had are hardy here, but the prairies north into Canada hold several promising ones, including the silvery-flowered *D. enneandra*. *Daleas* are easily grown from seeds, and many may also be grown from cuttings.

Perhaps none of the coral trees should appear in these notes, certainly not if the subject is to be restricted to hardy or even half-hardy material. But one southern native, *Erythrina herbacea*, and at least one tropical kind, *E. cristagalli*, are so useful for planting out in summer (started indoors in winter) that some space may be devoted to them. Handled in that manner, our native is an attractive plant over a long season, first when the red stem or stems emerge from the tuber in spring, then when the scarlet flowers, many or few according to the vigor of the plant, open and finally when the beanlike pods split open and reveal the persistent red beans. After the flower stem is well advanced, come the leaf-bearing stems. The plant is said to grow readily from seeds, requiring three years from the sowing to the first flowering, according to report, and by division of the root-stock.

The west and the southwest, especially the latter, appear to be full of *hoffmanseggias*, according to the floras, but we of eastern gardens scarcely know there is such a legume in existence. From the gardeners' standpoint, *hoffmanseggias* might just as well be included with cassias, anyway, for they are only separated by the botanist on some minor characteristics, such as the bipinnate leaves of our present genus instead of the pinnate leaves of cassia. *Hoff-*

manseggia densiflora, from southwestern Kansas southward and westward, is a promising candidate for garden use. The sparse tuft of ferny leaves is attractive, and the naked racemes of yellow flowers are produced throughout the summer, no matter how dry and hot the weather may be. All that comes from a root system made up of a number of little black tubers, which in turn afford a ready means of multiplication. It would be interesting, and perhaps profitable, to make a collection of *hoffmanseggias*.

Many tephrosias that I have grown deserve the attention of gardeners, some as soil binders, others as forage plants and still others as ornaments. Of the last-named, *Tephrosia leucosericea* (Kansas southward) is a beautiful example, possessing merits which would endear it to many discerning gardeners, if they only knew it existed. All who love white foliage would embrace it with joy, for its leaves are beautifully plaited with white wool. And then in early summer, when its condensed clusters of pastel pea flowers (a sort of blending of yellow and reddish) are on exhibition, it makes a pleasingly impressive appearance. It grows about a foot tall here, rising from a thick root which allows it to endure much dry weather. The plant is easily handled in the nursery and, when secured from the northern part of its range, has been able to withstand our winters.

Polygala is a vast assemblage (more than 500 species) of contra-

dictions and paradoxes, beauty and plainness, hardiness and tenderness, ease of culture and finickiness existing close together. Gardeners who have tried our eastern *P. paucifolia*, especially in collected plants, and have watched it pine away despite what they thought was tender care are likely to miss much if they let that experience keep them away from other milkworts. For instance, the little white-haired species, *P. alba*, native to the dry plains from Kansas southward, is not only easy to grow in a dry sunny situation, but it possesses a quiet beauty which appeals to the gardener. Its ease of culture, the hardiness of material from the northern part of its range, ease of propagation by division and a May and July blooming season, during which it produces pretty white angel-wing flowers on green wandlike stems, should make it a good seller, at least locally.

Although wine-cups, *Callirhoe involucrata*, early attracted the attention of gardeners throughout its

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2 to 2 1/2 ins.	3.00	2.75
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wide range, it seems to have fallen on evil days since someone made the uphappy remark that it is taboo because of its magenta persuasion. It means little to the average gardener, as I have observed from the reactions of visitors here, that the color is magenta. What interests them, as it does me, is its summer-long production of large (to two inches or more across) wine-cups on wide-spreading prostrate stems. Indestructible in heat, drought and cold, showy through its long blooming season and pleasing in the right associations, *C. involucrata* possesses merits entitling it to a place in all gardens. Although *C. papaver* is, strictly speaking, not a southwestern plant (it has a wide range over southern United States, I believe) and has never been able to stand our northern Michigan winters for more than a year or two, it can well find a place in these notes if its inclusion will bring it to the attention of growers in more favored sections.

A plant to fifteen inches in height and twice that across, as it grew here, a blooming season extending from late May until frost, during which it covers itself with wine-red cups, and the ability to do all that on little moisture and little more fertility give it special value for busy gardeners who want their plants to take care of themselves. I suspect from its behavior here that our light sandy soil is just what it likes. That and sunshine seem to be the sum of its needs. I also suspect that many complaints about poor germination of wine-cups can be traced to late planting of the seeds. Planting in extremely early spring is usually recommended, I believe, but I always have better results from fall sowing.

Before closing the notes on wine-cups, it might be well to give a little space to the annual, *C. digitata*, which I neglected to do when annuals were being discussed. Sow the seeds early where the plants are wanted or grow in pots for the sale of plants and they will gladden the latter half of the summer with a prodigious production of wine-cups, varying in color from pure white through shades of red to reddish-purple. The plant grows about two feet tall here and has flowers more than an inch in diameter.

[To Be Continued.]

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February 2 and 3, Wisconsin Nurserymen's Association, Milwaukee.

February 2 and 3, Virginia Nurserymen's Association, Hotel William Byrd, Richmond.

February 9 and 10, Pennsylvania Nurserymen's Association, Warwick hotel, Philadelphia.

February 11, West Virginia Nurserymen's Association, Ruffner hotel, Charleston.

February 15 and 16, Tennessee State Nurserymen's Association, Andrew Jackson hotel, Nashville.

VIRGINIA DATES.

The winter meeting of the Virginia Nurserymen's Association will be held at the Hotel William Byrd, Richmond, February 2 and 3, announces David E. Laird, president.

WEST VIRGINIA PLANS.

The West Virginia Nurserymen's Association will hold its winter meeting at the Ruffner hotel, Charleston, February 11, at 10 a. m. The nature of the meeting will depend on the number that plan to attend, states F. Waldo Craig, secretary-treasurer, in a letter to the membership. Even if only the local group is represented, a luncheon and meeting will be held. But if a good representation can be expected from other parts of the state, a program will be arranged for the day.

TENNESSEE PLANS.

The annual meeting of the Tennessee State Nurserymen's Association has been announced for February 15 and 16, at the Andrew Jackson hotel, Nashville. It has been set at this later date, instead of in January, in order that Richard P. White, executive secretary of the American Association of Nurserymen, may come from Washington, D. C., to address the members.

M. Kent McClain, president of the association, has sent a letter to members asking them to report those of their families and employees who are serving in the armed forces, so that a chart may be displayed at the meeting.

Members have also been asked to

report the percentage of increase or decrease in their employees within the past twenty-four months. "This information, taken as a whole, will be of value to the members as a fairly clear picture of the amount of nursery stock that will be produced in Tennessee within the next few years," reads the president's letter.

ROADSIDE SHORT COURSE.

The fourth annual short course on roadside development, jointly sponsored by the Ohio department of highways and Ohio State University, is scheduled for March 10 and 11.

The conference sessions will be held as usual at Ohio State University.

The general theme of the meetings will be "The Complete Highway," and the discussions will cover parkway and freeway development, research plans and values and educational recommendations for engineers, landscape architects, the lay public and educational institutions.

The detailed program may be secured by writing to Dallas D. Dupre, Jr., Ohio Department of Highways, Columbus 15, O., or to Prof.

WISCONSIN PROGRAM.

The twenty-seventh annual convention of the Wisconsin Nurserymen's Association will occupy two days, February 2 and 3, at the Hotel Schroeder, Milwaukee, Wis.

At the opening session, Wednesday morning, February 2, President Walter Remond will present his address and Secretary Thomas S. Pinney, his report. E. L. Chambers, state entomologist, will speak on "What's New in Regulatory and Control Measures?"

At the noon luncheon, C. R. Dieneen, president of the Milwaukee county park board, will tell about the Milwaukee county park system.

On the afternoon program are S. A. Wilde, associate professor of soils at the University of Wisconsin, on "New Developments in Culture of Trees and Shrubs," and William Longenecker, associate professor of landscape design, giving an illustrated lecture on plant materials and arboreta.

In the evening Jens Jensen will speak on "Appreciation of our Native Landscape," a subject for which he is nationally known.

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At the morning session February 3, H. J. Rahmlow, secretary of the Wisconsin State Horticultural Society, will tell "What's New in Fruits," and S. S. Telfer, prominent Door county commercial fruit grower, will speak on "Growing Cherries and Apples in Door County." K. D. Andrews, of Andrews Nursery Co., Faribault, Minn., will discuss small fruits.

At the afternoon session, William J. Smart, of the D. Hill Nursery Co., Dundee, Ill., will discuss the topic, "The Nursery Business in a Postwar World." Five-minute talks on post-war plans and opinions will be delivered by several members, including R. Behle, H. W. Riggert, Charles Hawks, A. Klokner, W. G. McKay and Al Wetli.

Reports of committees and election of officers will conclude the program.

PEONY SOCIETY SHOW.

The American Peony Society will hold its annual show and meeting this year, according to announcement by W. F. Christman, Northbrook, Ill., editor of the American Peony Society Bulletin. The show and meeting will be held at Milwaukee, Wis. The exact dates will be announced later, but the tentative dates selected are June 17 and 18.

**BERRY PLANTINGS FEWER
IN PENNSYLVANIA.**

Plantings of blackberries and raspberries certified in 1943 were noticeably less than in 1942, according to a late report from the bureau of plant industry of the Pennsylvania department of agriculture. In 1943 eighty plantings were certified and twenty-six rejected, while in 1942 eighty-five were certified and thirty rejected.

Plantings are inspected for various diseases and the presence of insect pests. Plantings that fail to meet the minimum standards of freedom from disease were withheld from all markets. According to the bureau, several years must elapse before plants are able to produce crops, and if badly diseased plants are started the grower may find it necessary to destroy the entire planting at about the time the first crop is ready to market.

Inspections were made during the spring and summer months when plants were in full leaf and when various diseases are readily identified. Inspections included blackberries and black and red raspberries and were made in eighteen counties of the state.

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Priced by height and spread. 18x12 ins. to 24x22
ins. in unlimited quantities. Also large specimens
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PINK FLOWERING DOGWOODS
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SUPERIOR CALIFORNIA ASSOCIATION OFFICERS.

Louis Vistica, installed as the new president of the Superior California Nurserymen's Association last month, is the owner of the Louis Vistica Nursery, Live Oak, Cal. He served his apprenticeship in the neighborhood of San Francisco as far back as 1906 and started in the nursery business at Stockton in 1914. While he deals in a full line of general nursery stock and does tree-surgery and landscaping, at present he finds the demand is for fruit trees, with not enough to go around.

Always interested in orchards, he now has one of seventy-two acres, all in sweet cherries, on Stockton Morello root, a quite successful enterprise.

The accompanying picture of Jack Bond, new secretary of the Superior California Nurserymen's



Louis Vistica.

Association, was appropriately taken in the trial grounds of marigold breeding plots. Before he became a partner in the Central Valleys Seed Co., Sacramento, Cal., he spent eight years as hybridist for Bodger Seeds, Ltd., having charge of the trial grounds and being instrumental in the development of many new introductions in flowers, some of which won All-America honors. He also made several trips out of the United States for Bodger, searching for new varieties. He is now manager of the retail business of the Central Valleys Seed Co. and in charge of the flower seed department and of the nursery which is operated in connection with the retail store.

The meeting of the association held January 5 was at dinner at the Travelers hotel, Sacramento, where members were guests of the Pacific Guano



J. W. Bond.

Co. Camellias were discussed by Mr. Hopfer.

BUILDING AT TOPPENISH.

Construction of a frostproof building of brick and tile, to be used for vegetable storage and for the handling of nursery stock, was started recently for the Washington Nursery Co., Toppenish, Wash. The new building is being put up over part of the basement of the old frame building which was destroyed by fire in November, 1942.

The basement space has been made deeper to allow loaded trucks to drive inside. The office, now in a temporary building, will be moved into the new quarters when they are completed. Digging of seedling stock will begin as soon as the new establishment is ready, according to B. F. Sturm, owner of the nursery.

GORDON LAING, Alameda county agricultural commissioner, spoke on "Intercounty Nursery Stock Certificates (pink tag) and New Revisions of the Agricultural Code Affecting Nurseries," at the meeting of the Central California Nurserymen's Association, held at the Florence restaurant, Niles, January 13.

SPECIMEN AZALEAS

Mollis, salmon to apricot. Azalea Altacularensis, copper to orange. Rhododendrons, Ponticum and Catawbiense Hybrids.

30 to 36 ins.	\$30.00
3 to 4 ft.	40.00
4 to 5 ft.	50.00
5 to 6 ft.	60.00

Add 10 per cent per unit for less than 5 of one variety and size. Packing free. Cash with order.

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Nurseryman Mulino, Ore.

AMERICAN NURSERYMAN

CRATH WALNUT STRAINS.

One of the most promising recent developments in northern nut culture is the introduction into America of hardier strains of *Juglans regia*, usually called the English walnut, but more correctly termed the Persian walnut. In a recent issue of Illinois Horticulture, A. S. Colby, professor of pomology at the University of Illinois, reported on experiences in Illinois with the hardier strains known as the Crath Carpathian type.

Rev. Paul C. Crath, of Toronto, Canada, a native of Poland, whose father was head of the agricultural college in the Ukraine, went back to his own country as a missionary in the early 1930's and there noticed the hardiness of the Persian walnuts growing in that severe climate.

Realizing the possibilities of these strains for fruiting in North America, he combed the rich Russian agricultural region in the Carpathian mountains for seeds for experimental planting over here, harvesting them from trees uninjured at temperatures of minus 40 degrees Fahrenheit. These parent trees were carefully selected for regular production of good crops of thin-shelled, easily cracked nuts of good quality. The trees were

MAHONIA AQUIFOLIUM

1-yr. seedlings, 4 to 10 ins., \$20.00 per 1000
2-yr. seedlings, 6 to 12 ins., \$30.00 per 1000
Heavy transplants, 18 to 24 ins., potted, 75c ea.
Heavy transplants, 24 to 30 ins., potted, \$1.00 ea.
For B & B transplants, add 25c each to above.
Liberal count on seedlings if check sent with order.

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American Nurseryman Chicago

growing at such distances from others that cross-pollination was avoided. Reverend Crath had observed that seedlings from such self-pollinated trees usually bore nuts that closely resembled those of the parent.

Each tree from which nuts were saved was given a number in order to keep future records straight. The nuts were planted in a nursery established by Reverend Crath near Toronto. Wishing some point in this country where his trees could be distributed without the difficulty and delay incurred in moving small shipments across the border, Reverend Crath arranged with Samuel H. Graham, Ithaca, N. Y., to take sole charge of their distribution in the United States. Considerable interest has been aroused in the possibilities of these strains, and their distribution has been widespread, with over 2,000 seedlings sent to many northern states since 1937. In a few more years, after a considerable proportion of these numbered seedlings have come into bearing, we shall have some valuable information regarding their possibilities in sections of the country where previously it had not been considered possible to grow Persian walnuts.

Several Illinois horticulturists have planted seedlings of these strains and have already brought one or more of them into bearing. Others have used scion wood of the Crath types in top-working black walnut trees. At the Illinois agricultural experiment station there are over twenty Crath seedlings under number, planted in 1937 and 1939. They are all healthy and vigorous, and several bore pistillate flowers in 1942.

Comparatively little is known about the bearing habits of the Crath walnut strains. Several growers have noted that their trees began to bear pistillate flowers within a few years after planting, but set no nuts. Evidently the staminate catkins necessary for pollen production are somewhat slower in appearing. Other strains of Persian walnuts are said to be slow in this regard, usually beginning to bear female flowers from three to five years before male flowers are produced. It is thought possible that Persian walnut pistils will accept black walnut pollen.

The prospective planter should understand that these new walnut strains are as yet only in the experimental stage. It is believed that some of them have considerable promise. However, they must be properly planted and cared for if one expects them to grow and bear. Too close planting should be avoided, and some attention must be given to forming

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the head when the tree is young. No
one knows exactly when they will
bear, how much and how long. In
their native country, trees have been
observed estimated to be over 300
years old.

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Our seedlings are all sold for this sea-
son's delivery except some No. 2 and 3
apple; but if you want to be protected
for your seedlings for fall of 1944, please
send your order now so that we will
know just how to make our planting to
protect our customers. Prices will be in
line with the other seedling growers
that are set next July. We have Norway
and Schwedler Maples, Cut L. W. Birch,
European W. Birch, Chinese Elm and
Paul's S. Hawthorn. Nice trees in one
and two-year-olds, for this winter's de-
livery. Please let us hear from you.
Your old friend,
John Holmason

Vegetable Plants for Victory Gardens

Better victory gardens in 1944 are expected by the United States Department of Agriculture, and probably more of them. The demand for seedling vegetable plants from the public will probably be larger than in 1943, when many inexperienced persons relied on seeds, to their own disappointment.

Nurserymen supplied nobody knows how many million seedling vegetables for the victory gardeners, and incidentally this was a better business for most of them than growing vegetables themselves. Demand will be greater and probably more intelligent than last year. So that the trade may do a better job of supplying the right plants at the right time, Victor R. Boswell, assistant head of the division of fruit and vegetable crops and diseases of the United States Department of Agriculture, has proffered advice on the subject, and his statements as to varieties and practices are included below.

No one variety is best for all seasons everywhere in the country. More care than in the past should be taken to insure that the varieties offered for sale are the best adapted for the locality. There is little excuse, for example, for offering Ponderosa tomato anywhere. Although everyone knows the name and millions may ask for it, they should know that it is generally inferior to other varieties that they should grow. It is wilt-susceptible and drops its blossoms because of bad weather, partial shade or too much nitrogen in the soil more than many other varieties. Even under good conditions it rarely equals the best of the newer tomatoes. Oxheart is notoriously unproductive. The aim should be to supply those varieties that will produce the greatest yields in the particular locality. For the southern two-thirds of the country, Rutgers, Marglobe and Pan America are among the best. In the northern third, Bonny Best and Earliana are still good, but some of the new varieties like Bounty and Victor have special merit in the cooler and shorter-season localities. Dealers should know the recommendations of their state and local specialists.

The home gardener often wastes much of the cabbage he grows because it all heads at nearly the same time and some deteriorates before it can be used. In many localities the helpful dealer can perform a real service by having cabbage plants of two or three varieties on hand. Suppose the

gardener wants two dozen plants; perhaps he cannot use two dozen heads of Golden Acre before they go bad, but can use a total of two dozen heads if a third is Golden Acre, a third is a late strain of Copenhagen Market and a third is Glory of Enkhuizen or some other midseason sort. A reasonable range in time of heading in a spring planting of cabbage in the home garden is desirable. Care should be taken, however, that only those varieties are carried that are adapted to the locality. The dealer who can thus contribute to the success and usefulness of a customer's garden, especially during wartime, will be doing more than making a satisfied customer.

It was especially noticeable in the spring of 1943 that tender plants—tomatoes, peppers and eggplant—were on display much too early in some localities. Inexperienced gardeners were buying them briskly, setting them in the open without protection, losing the plants from killing by cold and buying more plants to reset. There were several bad results from this poor timing.

(1) Many gardeners were unable

to obtain plants at the proper time because of the waste of plants that were grown only to be lost. This in turn led to many plantings that were much too late to produce good yields, thus incurring a double loss—loss of plants and loss of yield.

(2) Other gardeners did not buy plants too early, but when they did buy at the proper time, they found only plants that had been held for so long that they were too spindling or otherwise too poor to give really good results when planted.

(3) Some gardeners who bought too early were able to carry their plants through the cold, but only by makeshift protection and with more or less stunting and other damage.

Plant supplies, on the other hand, should not be delayed beyond the best local dates for transplanting because that would reduce yields.

The main responsibility for having plants available at the right time naturally falls on the actual grower. He must sow each crop at the right time and manage the plantings carefully if he is to place them in the dealer's hands in good condition and on time. There is no intention of

22,000,000 Victory Gardeners Want You to Grow Vegetable Plants

For Them to Transplant This Spring

**We Have Produced Fine Stocks of the
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For your production for plant sales and crop plantings, both vegetables and flowers, order seeds early, before stocks of best varieties are exhausted.

Be sure to include Jubilee, Burpee's new Tomato that was praised from coast to coast.

If you do not already have Burpee's Blue List, wholesale prices for Nurserymen, write today!

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DWARF CHAMPION. A pink-fruited variety of compact sturdy growth. Very popular for flat sales. 1 oz., 65c; ¼ lb., \$2.25.

JOHN BAER CERTIFIED. Extremely popular early sort. 1 oz., 65c; ¼ lb., \$2.25.

JUBILEE. A new and truly different sort. Orange-yellow in color, excellent for home gardens. 1 oz., \$1.60; ¼ lb., \$5.50.

MARGLOBE CERTIFIED. A re-selected strain of extremely heavy yield. 1 oz., 60c; ¼ lb., \$1.85.

SAN MARZANO (Italian Red Plum). Favorite for paste and excellent for home canned juice. 1 oz., 75c; ¼ lb., \$2.75.

VICTOR. A new very early type with a self-topping vine. 1 oz., 75c; ¼ lb., \$2.50.

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discussing in this article the details of how to grow vegetable plants, but rather to emphasize the importance of the job to be done, the necessity of accurate timing and the opportunities for a fair profit.

Many operators who have never before grown vegetable plants commercially will need to consult local experts or specialists of their own state agricultural experiment stations as to the date that plants of each vegetable should be first ready to transplant into the garden, also over how long a time plants should be made available and when the peak of planting normally occurs for each. Those agencies can also recommend proper varieties, dates of sowing and methods of handling each kind of plant for any locality in their respective states.

Roughly speaking, it requires about two months to produce good plants of the vegetables mentioned ready for transplanting if they are grown in hotbeds or in hotbeds and coldframes. In greenhouses, where the temperature and moisture can be controlled better than in frames, the warm-season crops can be started ten days to two weeks later than in frames. Cabbage and other hardy plants for transplanting before the last frost should not be rushed to get a good size, but grown at a moderate rate and then slowed down by a cool temperature to make them less susceptible to cold damage. Plants that are old, stunted or severely hardened may still have a high survival value, but they are less productive than those from seeds sown at the right time, grown at a moderate rate and transplanted at the right time.

More good plants can be obtained in greenhouses per unit of seeds sown than in hotbeds and coldframes. If properly handled, a few seeds will go a long way. Conservative estimates of the number of good plants obtainable per ounce of seeds when seedlings are pricked out and set in beds, flats or pots are: Broccoli and cabbage, 5,000 or more; tomato, 3,000 to 4,000; pepper, 2,000 to 3,000; eggplant, 3,000 to 4,000; lettuce, 7,000 to 10,000.

Every dealer should try to estimate the demand for plants he can expect and work out plans now for supplying it.

JOSEPH JOHNSON, who operates a large nursery and greenhouses near McKeesport, Pa., and conducts several flower stores as Johnson the Florist in the Pittsburgh area, is at the Dallas Park hotel, Miami, Fla., for a stay of two months.

Victory Garden VEGETABLE SEEDS for PLANT PRODUCTION

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Paradise \$0.85 \$ 2.50

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Early green sprouting 1.35 4.00

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Fill Basket 3.00 9.00
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CABBAGE
Charleston Wakefield 2.35 6.95
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CAULIFLOWER
Super Snowball, oz., \$3.00
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Giant Pascal 2.00 6.00
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Black Beauty 2.70 8.00

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Siberian 2.00 6.00

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MUSTARD
Southern Giant, Curled..... .50 1.50

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California Wonder 2.00 6.00
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Greater Baltimore 1.50 4.50
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92 WARREN ST. NEW YORK 7, N.Y.

Fertilizer Outlook

Present prospects are that more fertilizer will be produced in 1944 than at any previous time, according to data compiled by the National Fertilizer Association.

Consumption of all kinds of fertilizer may run in excess of 11,000,000 tons. Last year's consumption was about 10,500,000 tons, and that for 1940 less than 8,000,000 tons.

The association warns, however, that in view of labor shortages in fertilizer factories and transportation difficulties, it may be wise for every user who has a dry place in which fertilizer can be stored now to have it delivered as soon as possible. It is necessary to keep fertilizer moving if the heaviest demand in history is to be met.

Last year 460,000 tons of actual nitrogen (a fraction of the bulk quantity) were used as fertilizer, 204,000 tons as side and top-dressings and 256,000 tons in mixed fertilizers. Government agencies now give assurance that 625,000 tons of actual nitrogen will be available for fertilizer use this year—thirty-five per cent more than last year. Of this total, 271,000 tons will be available for side and top-dressings, 354,000 tons for use in mixed fertilizer.

There will be about as much nitrate of soda for direct use as last season. Ammonium sulphate will be used entirely in mixed fertilizers except in the west, where it will be available for direct use or for mixing, but there will be larger supplies of cyanamide, Uramon and ammonium phosphate than in either of the past two years. There will also be cal-nitro, formerly imported from Norway and Germany, but now manufactured in this country.

Ammonium nitrate containing 32.5 per cent of nitrogen is now being produced in quantity in a number of government factories in this country and Canada and by one private factory in California. About 230,000 tons have been allocated for direct use.

Production of superphosphate has been increasing steadily month by month. Production of normal superphosphate in 1942 was 5,144,484 tons, basis eighteen per cent. The present rate of production indicates a total output of over 6,500,000 tons for the 1943-1944 fertilizer year. It is estimated that about 6,000,000 tons of this will be distributed by the fertilizer industry in mixed fertilizer and as superphosphate, and the rest by AAA in its grant-of-aid program. About 300,000 tons of concentrated

superphosphate will be produced, something more than a third of which will probably be exported under lend-lease.

Domestic potash factories are producing about 700,000 tons of actual potash this year, as compared with about 380,000 tons produced in 1940, but even so there will not be enough to supply the fertilizer demand. The average potash content of all mixed fertilizers sold last year was just over seven per cent as compared to six per cent in 1939 and 1940. With an increased tonnage of mixed fertilizer to be manufactured this year, it is expected that the potash content will average about five and one-half per cent—about the same as 1936. The nitrogen content of mixed fertilizers will be increased substantially, and phosphoric content will remain about the same.

The Office of Price Administration has issued the second revision of MPR 135, which sets dollars-and-cents prices for each permitted grade in each state substantially at present levels.

SAVE ORCHARD NITROGEN.

Partial disking of sod, the use of legumes, mulching and applications of available organic forms of nitrogen are possible means of meeting a shortage of commercial fertilizers for apple orchards.

It has been found that on good orchard soil apple trees in good vigor, especially if fertilized with nitrogen the preceding several years, will not suffer seriously if nitrogen is omitted for a year. Under clean cultivation a good soil will carry apple trees for a number of years in such an emergency.

As a nitrogen-conserving measure it has been found that plowing, or better yet, disking up a sod without total destruction of the growth will release nitrogen for carrying the trees. The growing of legumes in the orchard also greatly helps in nitrogen conservation, especially in short rotations. In a well mulched orchard of McIntosh on a light and not too productive soil, hay and straw mulch have maintained high production for five or six years without addition of commercial nitrogen.

The common forms of commercial nitrogen have been found to be practically interchangeable, while organic nitrogen has proved effective if well incorporated with the soil, although some forms may be disappointing if

LILACS FOR AMERICA

By John C. Wister

64-page report of survey by
AMERICAN ASSOCIATION OF BOTANICAL
GARDENS AND ARBORETUMS

Price, \$1.00

This contains full information as to the color and classification of all known Lilac species and varieties, a list of nurseries in which the varieties are available, a list of recommended varieties and a list of varieties recommended for discard, as well as other notes.

* * * * *

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applied only on the surface. A single application of nitrogen made in early spring has been found as effective as splitting the amount and more effective than when applied later in the season.

OHIO SHORT COURSE.

[Continued from page 8.]

versity, was unable to attend the short course because of serious illness in his family. In place of his scheduled talk, an informal discussion period of postwar landscape problems was held. Leading the discussion were Victor H. Ries, George Siebenthaler and Dallas Dupre, Jr.

Victor H. Ries, associate professor of horticulture at Ohio State University, stated that he felt that there would not be a complete change of landscape development. More attention should be given to soil preparation and design. It is the nurserymen's responsibility to encourage better design.

Replanting of old jobs which were once perfectly good but are now overgrown should be undertaken. More should be learned about the ultimate size and effect of plant materials.

George Siebenthaler, of the Siebenthaler Co., Dayton, expressed his desire for a more restricted use of varieties. The Italians have held their characteristic design for many years. A limited number of plants were used in their plantings. Plants lose their individuality in mass plantings. Overcrowding will be less if we look at the mass effect rather than the individual plant. He predicted a good business after the war from both new plantings and revamping of old ones.

Dallas Dupre, Jr., director of highway beautification in the Ohio department of highways, expressed the need of better prepared and educated personnel to carry on all public projects. There will be a large field for properly trained men. Mr. Dupre went on to discuss several legislative programs now pending in Ohio. These consist of the recodification of the state highway law, memorial plantings and postwar highway projects.

H. S. Wagner, director of the Akron metropolitan park district, discussed "The Place of Trees in Properly Designed Business and Residential Districts." He stated that there is too much disunity on single streets due to types of architecture, paint colors, etc. Trees are the only means that can be used to beautify and unify the whole pic-

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ture. This beautification should extend into the business district as far as practical. Trees too close to the pavement lower their aesthetic value. Shade on the streets is not the primary purpose of the trees. Trees, because of their unifying value, make property values higher and rentals easier.

Location of Trees.

H. S. Wagner was again called on, to discuss "Location of Trees in Relation to Streets, Sidewalks and Property Lines." Mr. Wagner advises the planting of street trees inside the sidewalks if they can be located on public property. If they are located on private property, jurisdiction over them would be lost. Difficulties would develop in pruning and the general maintenance program. If the trees have to be planted between the sidewalk and the curb, they should be a little nearer the sidewalk. There is better soil there, and the roots would not have to grow under the street, where moisture and aeration may be a problem. In business districts, he advises planting at least five or six feet from the curb. He suggested European linden as a good street tree in business districts. Another is the Norway maple. In residential districts these will also be good and, in addition, pin and red oaks, elms and thornless honey locust.

Mr. Wagner advises that more attention be given to care after planting, when plans are developed for street plantings.

Shrub Pruning.

The last discussion of the afternoon session consisted of a symposium on "Shrub Pruning and Trimming in Landscape Plantings," under the direction of Professor Ries. J. Melvin Easterday, landscape consultant, Canton, and A. M. Grube, of the Lakewood Nursery, Lakewood, answered the questions presented.

Answers to several of the more important questions discussed were:

To bring old shrubs down to a smaller size, Mr. Grube said his method is to cut back each year one-third of the old growth. This opens up the center of the plant so that light can get into it, and he finds flowering and fruiting are much better.

Flowering crabs, said Mr. Easterday, need plenty of room. If given room, little pruning is necessary. Little old wood is cut off because of loss of bloom in this practice. The

tree should be kept open by cutting out crossing branches and any sucker growth that develops.

Rhododendrons can be kept down to a height of five feet indefinitely, according to Mr. Grube, by cutting out a few of the taller shoots each year just after blooming. Don't cut just to five feet, but a little way below. The buds will break there and give two shoots. If these are again cut, they break and the number of flower shoots is increased enormously and the plant still doesn't get over five feet.

To keep rebuds small, Mr. Grube stated, treatment must start in the nursery, as when the plants get older, any large cut exposes them to disease and gradually the whole plant dies.

The subject of handling ivies came up, and several persons agreed that Sylvania Beauty was one of the best winter-hardy varieties of the English type.

Pruning practices involved with many other shrubs were discussed. This session was one of the best of the entire program.

New Sprays.

Alex Laurie, professor of horticulture at the university, discussed some of the common errors in nursery stock production and some recent developments. He warned nurserymen against the use of oil sprays on some evergreens and deciduous plants. He reminded them about confusing fungicides with insecticides. He warned that mixing spray

materials may have disastrous results. Not all sprays will mix. He advised leaving the mixing up to chemists of the company that makes the spray materials, if you do not have proof that they are compatible.

Azobenzene is a new spray material for thrips and red spider. Its main point is that it lasts on the plant longer than normal sprays and kills the young as they hatch, as well as all adults.

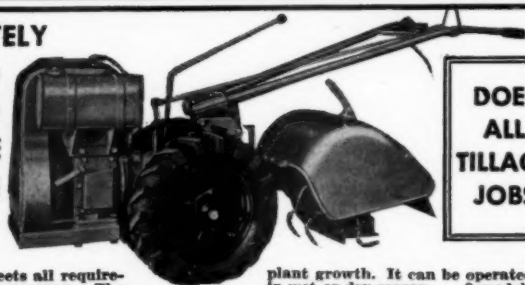
Another new spray material, Geserol, is good for flies and other insects where a contact insecticide is needed. It has a lasting effect and will kill insects for some time after the spray has been used. Fermate is a new fungicide that is better than Bordeaux mixture for some troubles. It is of a dirty black color, but this disappears after about three days. It has given good results in control of black spot of roses.

A new rodent control preparation, called Rodenticide, is supposed to be good, but can only be obtained by writing to the Rodent Control Fund, Amherst, Mass.

Among the mistakes made by nurserymen, according to Professor Laurie, is that oaks and sweet gums need an acid soil for best growth. One of the best acidifiers is a mixture of one part each of sulphur, iron sulphate and aluminum sulphate. He pointed out that most people think commercial fertilizers are either acid or basic. The truth is that practically all of them are of a nearly neutral reaction. Many people believe that mulches bring about an acid soil con-

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You're working . . . and I'm fighting . . . for the same thing. But you could lose it for both of us—without thinking. A guy like you could start bidding me right out of the picture tonight. And my wife and kid. There not being as much as everybody'd like to buy—and you having the green stuff. But remember this, brother—everything you buy helps to send prices kiting. Up. UP. AND

UP. Till that fat pay envelope can't buy you a square meal.

Stop spending. For yourself. Your kids. And mine. That, brother, is sense. Not sacrifice.

Know what I'd do with that dough . . . if I'd the luck to have it?

I'd buy War Bonds—and, God, would I hang on to them! (Bonds buy guns—and give you four bucks for your three!) . . . I'd pay back that insurance loan from when Mollie had the baby . . . I'd pony up for taxes cheerfully (knowing they're the cheapest way to pay for this war) . . . I'd sock some in the savings bank, while I could . . . I'd lift a load off my mind with more life insurance.

And I wouldn't buy a shoelace till I'd looked myself square in the eye and knew I couldn't do without.

(You get to knowin'—out here—what you can do without.)

I wouldn't try to profit from this war—and I wouldn't ask more for anything I had to sell—seeing we're all in this together.

I've got your future in my rifle hand, brother. But you've got both of ours, in the inside of that stuffed-up envelope. You and all the other guys that are lookin' at the Main Street shops tonight.

Squeeze that money, brother. It's got blood on it!

Use it up . . . wear it out,
make it do...or do without



dition. Materials like sawdust, pine needles, oak leaves, beech leaves, etc., are really not so acid as formerly thought. He warned of using tar and creosote on greenhouse benches. These materials release toxic materials. Asphalt is harmless and will serve the same purpose. He ended by giving nurserymen the tip that they should propagate Kurume azaleas for florists to force; this can be made into a paying proposition if you have a greenhouse or frames.

Gustaf E. Malmberg, landscape gardener at the Masonic homes at Elizabethtown, Pa., presented color slides to illustrate comments on "Some Woody Ornamental Plants." It was interesting to note that many of the plants doing well at Elizabethtown are not considered sufficiently hardy in central and southern Ohio to recommend.

Nursery Management.

Francis Turner, of Berryhill Nursery Co., Springfield, spoke on "Management of Evergreens and Shrubs from the Propagation Bed to the Finished Product." Points stressed by Mr. Turner consisted of (1) choosing new varieties to add to the plant list, (2) sizes to buy, (3) fall planting, (4) a known market for the product, (5) spacing, (6) block sizes, (7) trimming, (8) fertilizing and mulching and (9) methods of handling specific plants. Much worth-while information was given, and his paper will appear in a later issue of the American Nurseryman.

D. C. Kiplinger, assistant professor of horticulture at Ohio State University, discussed "Modifying Soil Conditions." The main factors in soils that we want to change are acidity or alkalinity, moisture and aeration. Crushed limestone and hydrated lime are used to increase soil alkalinity. Sulphur, iron sulphate and aluminum sulphate are used to increase acidity. The amounts of these materials used vary with the kind of soil. Clay soils require more than sandy soils. Recommended amounts were given. Sandy soils are not good at holding moisture. This situation can be helped by additions of organic matter. Growing a big green manure crop and turning it in adds organic matter. In clay soils, organic matter will loosen the soil and improve drainage and aeration. In clay soils, aeration may be increased by the addition of such materials as cinders of not over one-fourth inch in diameter, peat moss and sand.

P. D. Strahm, of the Transconti-

ental & Western Airlines, spoke on "Possibilities of Transportation of Nursery Stock by Cargo Plane after the War." He told about a plane now used by the army that has the power to carry sixty tons of cargo. Planes of larger capacity may be built and nursery stock will no doubt be one of the cargoes carried. He looks forward to the use of gliders to carry freight. Light fiberboard or wooden boxes can be used in shipping. They should be strong to prevent crushing. There are no compartments for such perishable things now.

R. D. Barden, associate professor of agriculture engineering, discussed "War Machinery for Nurserymen." Production prospects are better than were expected earlier in the year. The War Production Board has authorized the manufacture of eighty per cent of the amount of farm machinery made in 1940; formerly it was only forty per cent. War ma-

AMERICAN NURSERYMAN

chinery will be distributed through redistribution centers set up by the government, but the method of operation is not yet clear.

Dr. L. C. Chadwick discussed "Recent Developments and Regulations of Interest to Nurserymen." He mentioned that a committee had

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ft., \$40.00; 500 1 1/2 to 2-in., \$75.00; 500 2 to
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Delicious, Gano and York. Pear grafts and
scions in Kieffer, Garber, Conklin and Bartlett.
Apple and Pear scions, \$8.00 per 1000. 500 Elberta
Peach, 2500 Jonathan, Red and Yellow Delicious
and Transparent in 2-yr., 7/16-in., 9/16-in. and
1 1/16-in.

WANTED: 25,000 Lining-out Grapes, all varieties;
Evergreen and Shrub liners. Send surplus
list at once.

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Our collection contains 90 per cent of the list
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1-yr.-old\$0.25
1 1/2 to 2 ft.60
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3 to 4 ft.1.25
4 to 5 ft.2.00

(Bushy plants.)

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EXCELLENT STOCK for Spring delivery. Per 10,
Norway Spruce, 2 to 3 ft., XX, \$3.50; White
Birch, 6 to 8 ft., \$7.00; American Mountain Ash,
5 to 6 ft., \$3.50; 7 to 8 ft., \$4.50; White Ash, 5
to 6 ft., \$2.50; 7 to 8 ft., \$3.50; Cotoneaster
neut., 18 to 24 ins., \$1.50; Caragana abor., 3 to
4 ft., \$1.25. Free packing. Get our price on
Colorado Blue Spruce.

PEQUOT NURSERY, Pequot Lakes, Minn.

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Large surplus of red, white, pink and purple
Crape Myrtle, 18 to 24 ins., 6c; 2 to 3 ft., 10c.
Write for prices in carload lots, also for prices on
small or carload lots of Magnolia Grandiflora,
leaves clipped, dug bare root and puddled in clay.
General Price List on request.

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Jacksonville, Texas.

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Chinese Elm Trees, 100 5 to 6 ft., \$11.00; 100
6 to 8 ft., \$15.00. Bailing free.

SWINK NURSERY CO., Swink, Colo.

Early-bearing bred-up budded and grafted
papershell Pecan trees. Peach, Pear, Figs,
Grapes, Plums, Apples, Strawberries, Youngber-
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25,000 Sycamore Trees, also Shrubs, 100,000
8-in. cuttings, 10,000 lbs. Kentucky Coffee Beans,
per lb., 25c; Osage Orange, 70c; Sycamore Pla-
tinus, 40c; Ailanthus, 50c; Regels and Amur River
North Privet, 70c; Catalpa, 60c.
PINK DOGWOOD—Puddled roots, 3 to 4 ft.,
\$12.50 per 10; 4 to 5 ft., \$16.50 per 10; 5 to 6 ft.,
\$18.50 per 10.

WAYNESBORO NURSERIES, Waynesboro, Va.

ORIENTAL SNOWBALL, 2 to 3 ft., \$3.50 per 10,
\$30.00 per 100; 3 to 4 ft., \$4.50 per 10, \$40.00 per
100; 4 to 5 ft., \$6.50 per 10, \$60.00 per 100.
WAYNESBORO NURSERIES, Waynesboro, Va.

VEGETABLE ROOTS

ASPARAGUS Crowns, 1-yr. old. Strong, vigorous
plants. Experienced growers recommend year
old plants. Martha Washington variety. Send
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VINE SPECIAL

Ampelopsis Engelmanni	Per 10	Per 100
2-yr., No. 1\$1.50\$14.00
2-yr., Medium1.2010.00
Veitchii, 8-in. pot1.8015.00
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Clematis (Large-flowering)
4-in. pot3.2030.00
2 1/2-in. pot1.8016.00
Varities: Baron Veillard, Gypsy Queen, ry Jackman, Mme. Andre, Ramon, Ville de Lyon.
Honeysuckle Heckrotti, 2-yr., No. 1	.....\$2.20	.....\$20.00
2-yr., Medium	.....1.80	.....16.00
1-yr., No. 1	.....1.40	.....12.00
2 1/2-in. pot	.....1.00	.....8.00
Tellmanniana, 2-yr., No. 1	.....2.50	.....22.00
1-yr., No. 1	.....1.80	.....15.00
2 1/2-in. pot	.....1.20	.....10.00
Hydrangea Petiolaris, 2 1/2-in. pot	.....2.50	.....20.00
4-in. pot	.....3.50	.....30.00
Silver Lace Vine, 2 1/2-in. pot	.....1.20	.....10.00
4-in. pot	.....2.00	.....18.00

JEWELL NURSERIES, Inc.,
Lake City, Minn.

WANTED

WANTED: Scotch Pine, Norway Red Pine 2
and 3-yr. old seedlings in quantity. Evergreen
liners in variety, 2 and 3 times transplanted.
Evergreen tree seeds. Address No. 291, care
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cago 4, Ill.

WANTED

Can use quantities of odd-size corrugated boxes
or containers. Please state quantity, size and
price.

PEEKSKILL NURSERY, Peekskill, N. Y.

WANTED

1000 Nandina Seedlings, will pay \$12.00. Send
Sample. Will sell 2000 2 1/2 x 2 1/2 Mugho Pines, balled
and burlapped, 400 each.

FOREST CITY NURSERY, Forest City, N. C.

WANTED—Tree sprayer, Ariens-tiller or Roto-
tiller and late model pickup truck. Write to Alex
Helusz, Center Road Nursery, Saginaw, Mich.

WANTED—Pin Oak and Plane tree lining-out
whips, around 8 ft. tall. Charles Momm & Sons,
Inc., 1417 Stuyvesant Ave., Union, N. J.

WANTED—Small swivel hoist to lift 1 1/2-ton
truck. Also a tree digger, large or small. North
Avenue Nursery, Lombard, Ill.

CONES

500 PINE CONES for \$2.50.
2150 for \$10.00; 6500 for \$24.00; 100 for \$1.25.
Approx. 2 1/2 and over to 1 1/2 ins. Little cones,
1 1/2 to 1 1/4-in., \$1.25 per 100. Same as above only
smaller: New shiny Lobloby cones for wreaths,
3 1/2 to 4 1/2 x 2 1/2 ins. and wider, \$2.00 per 100;
\$16.00 per 1000. Assorted cones \$1.75 per bu.
New Slash cones, approx. 4 ins. and over by 3 ins.,
\$2.00 per 100; larger Slash, \$3.00 per 100, 1000
Slash, \$16.00, 50 bu. Slash, 70c per bu. Samples,
\$1.00. Get your cones now for next season. There
will be few cones then, if any. Those of you who
bought our cones this past season, know what
they are.

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GIBLALTAR Frost Covers pay for themselves.
Most economical, long lasting also ideal for wind-
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prices. NEW AMSTERDAM CO., 122 Chambers
St., New York 7, N. Y.

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been appointed to find new uses for large quantities of nitrogen in the postwar period.

Preliminary tests have been run on roadside plantings of shrubs, Hall's honeysuckle and sweet clover with ammonium sulphate and with a high nitrogen complete fertilizer. Various rates of application were used, and many plots show remarkable development.

At Ohio State University there has been installed in the propagation house an automatic temperature and humidity system. This is to be used in further experiments on humidity in relation to rooting of cuttings. It was found that taxus cuttings rooted in a humidity of 65 to 70 per cent quite well. In a humidity of 90 to 95 the results were not so good. Humidities in between these points are to be tried.

It was also found that grafts put in an open bench with controlled humidity responded as well as those handled in the usual grafting case.

The insecticide and fungicide situation was discussed and the outlook is somewhat improved. Pyrethrum is still unavailable, but rotenone is being released in small quantities.

There will be more fertilizers made this year than ever before. Nurserymen can obtain some farm fertilizers of approved grades, and specialty fertilizers will be available for landscape use. There is little organic nitrogen fertilizer available. Supplies of phosphorus are ample, but deliveries may be slow. Potassium carriers are tight.

John Siebenthaler, of the Siebenthaler Co., Dayton, demonstrated "Root Pruning Practices in the Nursery" by means of samples of tree and shrub roots he brought. He recommended root pruning to slow down growth of plants to give better shape. Cutting back new growth to give compact shapes is defeating the purpose. The time of root pruning depends on the judgment of men doing the work. It depends on soil. Root pruning should be started when transplanting from the propagating bed to the field. This pruning is done by hand. After they are in the field the trees are root pruned with a horse-drawn U-shaped cutting blade. On bigger trees a mechanically drawn cable is pulled under the trees to sever the roots. After his talk, Mr. Siebenthaler showed, by a few color slides, the equipment he uses for root pruning in his nursery.

[To be continued.]

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is invaluable today in helping to cut down operating costs and to maintain a high volume level.

By using TRANSPLANTONE on all plants when they are moved, you can reduce your losses to the very minimum—especially in unfavorable seasons.

Just soak the soil around the roots of the newly moved plant with TRANSPLANTONE solution. With bare-root plants, nurserymen are getting excellent results by soaking them in a barrel of TRANSPLANTONE solution overnight before planting.

Treat broad and narrow-leaf evergreens, deciduous trees and shrubs with TRANSPLANTONE solution for reducing loss and promoting strong, vigorous growth right through the season. The treatment will not interfere with proper hardening of the wood before winter.

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Many of the most popular varieties of ornamental Evergreens are propagated by grafting and are available in the smallest lining-out size as grafts, which are listed on this page.

We have been engaged in propagation of grafts for more than twenty years and during that time have developed methods of growing which insure a strong thrifty plant. Shipments are made in April and early May. The trees are knocked out of pots and individually wrapped in paper, weighing about one-half pound per tree. We recommend shipment by express whenever the danger of frost is over in your locality.

Production of grafts this year is curtailed to conserve greenhouse fuel. Many of these items will be sold out long before shipping time arrives, so that we urge you to consider your needs and place your order at an early date.

GRAFTS

	Per 100	Per 1000
<i>Juniperus chinensis columnaris</i> (Blue Columnar Chinese Juniper).....	\$32.50	\$300.00
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<i>Juniperus communis depressa</i> , vase-shaped (Vase-shaped Prostrate Juniper)...	32.50	300.00
<i>Juniperus procumbens</i> (Japanese Juniper)	32.50	300.00
<i>Juniperus procumbens</i> Nana (Hill Japanese Juniper)	32.50	300.00
<i>Juniperus scopulorum</i> (Chandler's Silver Juniper)	32.50	300.00
<i>Juniperus squamata meyeri</i> (Meyer Juniper).....	32.50	300.00
<i>Juniperus virginiana</i> dark green (Hillbush Juniper, dark green).....	32.50	300.00
<i>Juniperus virginiana globosa</i> (Hillbush Juniper, very dark green).....	32.50	300.00
<i>Juniperus virginiana burki</i> (Burk Juniper).....	32.50	300.00
<i>Juniperus virginiana canaerti</i> (Canaert Juniper)	32.50	300.00
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<i>Juniperus virginiana hilli</i> (Dundee Juniper).....	32.50	300.00

25 of same variety at 100 rate; 250 at the 1000 rate.

In addition to the above grafts we grow a large assortment of various other popular ornamental Evergreens, which are all listed in our current wholesale list. Drop us a line if you do not have a copy of this catalogue, and we will be glad to send it to you together with one of our dealer's descriptive catalogues in full color.

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